DxMONITOR

Animal Health Report

Inside this Issue

Winter 1992

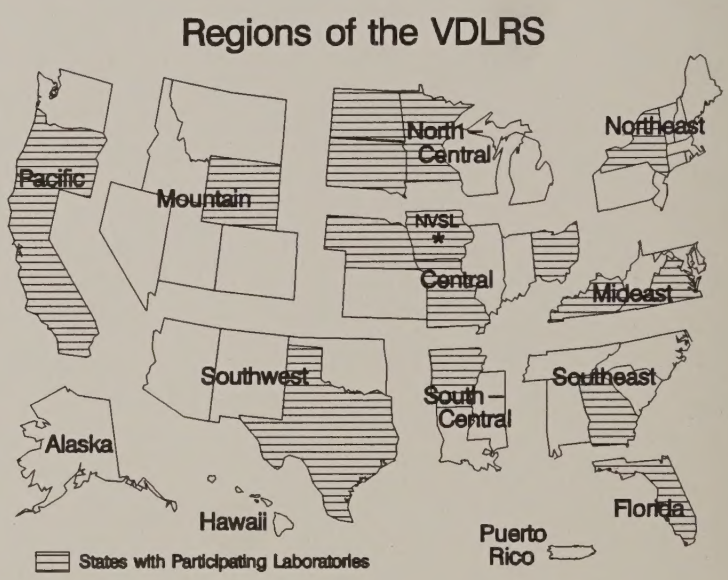
The DxMONITOR Animal Health Report is distributed quarterly as part of the Veterinary Diagnostic Laboratory Reporting System (VDLRS). The VDLRS is a cooperative effort of the American Association of Veterinary Laboratory Diagnosticians (AAVLD), the United States Animal Health Association (USAHA), and the United States Department of Agriculture, Animal and Plant Health Inspection Service (USDA:APHIS). The purpose of the DxMONITOR is to report trends of confirmed disease diagnoses and animal health data collected from veterinary diagnostic laboratories and the USDA:APHIS.

Caution should be taken when extrapolating information reported in the DxMONITOR due to the inherent biases of submitted specimens. Trends should be interpreted with care. An increase in the number of positive tests for a given diagnosis/agent may be the result of a true increase in prevalence, however, it may only reflect a new State testing requirement, a heightened awareness of the condition, or an increase in the number of laboratories reporting data.

For this issue, the disease reporting period for new data was July 1, 1992 through September 30, 1992. Data have been reported by diagnostic laboratories in the States indicated below, from the National Veterinary Services Laboratories (NVSL), and from the APHIS:Veterinary Services program staffs.

Abbreviations for regions used in this issue are:

AK = Alaska
CL = Central
FL = Florida
HI = Hawaii
ME = Mideast
MN = Mountain
NC = North-Central
NE = Northeast
PA = Pacific
PR = Puerto Rico & U.S. Virgin Islands
SC = South-Central
SE = Southeast
SW = Southwest
UNK = Unknown



Contributing Laboratories

The following laboratories have contributed data reported in the DxMONITOR Animal Health Report. Thanks to all of the individuals at these laboratories who have worked to make this report possible.

- **Arkansas Livestock and Poultry Commission Diagnostic Laboratory (Little Rock, AR)**
- **California Veterinary Diagnostic Laboratory System (Davis, CA)**
- **Bureau of Diagnostic Laboratories, Florida Department of Agriculture (Kissimmee, FL)**
- **Veterinary Diagnostic Laboratory, University of Georgia (Athens, GA)**
- **Veterinary Diagnostic and Investigational Laboratory, University of Georgia (Tifton, GA)**
- **Veterinary Diagnostic Laboratory, Iowa State University (Ames, IA)**
- **National Veterinary Services Laboratories (Ames, IA)**
- **Breathitt Veterinary Center, Murray State University (Hopkinsville, KY)**
- **Livestock Disease Diagnostic Center, University of Kentucky (Lexington, KY)**
- **Minnesota Veterinary Diagnostic Laboratory, University of Minnesota (St. Paul, MN)**
- **Veterinary Medical Diagnostic Laboratory, University of Missouri-Columbia (Columbia, MO)**
- **Veterinary Diagnostic Center, University of Nebraska-Lincoln (Lincoln, NE)**
- **New York State Veterinary Diagnostic Laboratory, Cornell University (Ithaca, NY)**
- **North Dakota Veterinary Diagnostic Laboratory, North Dakota State University (Fargo, ND)**
- **Reynoldsburg Laboratory, Ohio Department of Agriculture (Reynoldsburg, OH)**
- **Animal Research and Diagnostic Laboratory, South Dakota State University (Brookings, SD)**
- **Veterinary Diagnostic Laboratory, Oregon State University (Corvallis, OR)**
- **Texas Veterinary Medical Diagnostic Laboratory, Texas A&M University (College Station, TX)**
- **Bureau of Laboratory Services, Virginia Department of Agriculture and Consumer Services (Richmond, VA)**
- **Wyoming State Veterinary Laboratory (Laramie, WY)**

Lab Notes

This section presents short descriptions of current investigations, outbreaks, or events of potential interest to diagnostic laboratories. The purpose is to provide a forum for timely exchanges of information about veterinary diagnostic laboratory activities. Submissions from nonparticipating laboratories are welcome.

NVSL Reports Statistics on Porcine Respiratory and Reproductive Syndrome

The National Veterinary Services Laboratories (NVSL) report that from July through September of 1992, 10,167 swine serum samples submitted from 21 States were tested by the indirect fluorescent antibody assay (IFA) for porcine reproductive and respiratory syndrome (PRRS) antibody. Approximately 27 percent (2,743) were positive at a 1:20 dilution. The 10 States from which more than 50 samples were received had 19 to 48 percent positive. Samples were from swine of all ages, but a relatively large percentage were from young pigs. A survey conducted the previous quarter on culled breeding swine from 11 States showed a lower rate of positive reactors (7.3% of 6,264), with a range of 4 to 20 percent. Results from all groups tested indicate a very widespread rate of PRRS infection in the United States.

Attempts to isolate virus from tissues or serum have been successful in 5.3 percent of more than 2,000 field samples tested over the past year. Most of the strains were isolated using the proprietary cell line provided by Boehringer-Ingelheim, but in two cases isolation required porcine alveolar macrophages. Most isolates caused cytopathology in the first passage in cell culture, but some required two to three passages. Attempts are being made to improve the isolation efficiency and to develop a cell line which can be distributed to State diagnostic laboratories.

In addition to a better cell system for virus isolation, work on other improved diagnostic techniques is underway. This work includes studies on nucleic acid probes or polymerase chain reaction techniques to increase the speed and sensitivity of virus detection as well as studies to determine antigenic variation among strains isolated in this country and the degree of relatedness of these American isolates to European strains. We have determined that there are some swine herds in this country which test negative against the common strain of American origin but which are positive when tested against the European (Lelystad) strain. To date, this has only been seen in herds which had a recent importation of pigs from England.

Contact: Dr. Merwin Frey, Diagnostic Virology Laboratory, NVSL, (515) 239-8551.

New Laboratory Standards for Qualifying Bovine Semen for Export to the European Community

The European Community established a directive in 1991 which stated that bovine semen could not be accepted from the United States unless the semen was collected during the winter months from bulls which were negative for bluetongue (BT) antibody and which were located in one of 18 northern or northeastern States. Semen collected from bulls in other areas of the country or during the vector season required testing by a very complex virus isolation procedure before the semen could be considered negative for the BT virus. This virus isolation procedure was originally developed to qualify BT antibody-positive cattle for export and required repeated inoculation of sheep, embryonating chicken eggs, and culture cells with blood from each animal being collected.

A recent directive has been obtained from the European Community which states that importation of semen will be allowed from any bull which is negative for BT by the competitive enzyme-linked immunosorbent assay for antibody and for epizootic hemorrhagic disease by the immunodiffusion and neutralizing antibody tests 21 days after the last semen collection. We are hopeful that this is a new trend in BT export requirements.

Contact: Dr. A. David Alstad, Diagnostic Virology Laboratory, NVSL, (515) 239-8551.

No BSE in Turkey

In the latest edition of the U.S. Animal Health Association's handbook titled *Foreign Animal Diseases*, Turkey was incorrectly identified (page 135) as a country with confirmed bovine spongiform encephalopathy (BSE). This error was committed due to erroneous information supplied to the authors by other sources. Contrary to the article, no cases of BSE have been reported from Turkey. We apologize for any inconvenience or confusion caused by this error.

Contact: Dr. Mark M. Robinson or Dr. John R. Gorham, USDA:ARS, Animal Disease Research Unit, Pullman, WA, (509) 335-6029.

I. Patterns of Selected Diseases

Section I contains information on diseases of interest as designated by List B of the Office International des Epizooties (OIE). The purpose of reporting these data is to monitor confirmed cases of specific diseases on a State-by-State or regional basis so that national distributions can be mapped and evaluated.

Key to Figures in this Section:

- In some cases, the reported number of negative tests performed is a minimum because some laboratories were not able to determine the total number of negative tests performed.
- Data are presented by region or State of specimen origin and quarter year of specimen submission.
- Abbreviations for regions used in the figures are:

AK = Alaska	MN = Mountain	SC = South-Central
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FL= Florida	NE = Northeast	SW = Southwest
HI = Hawaii	PA = Pacific	UNK = Unknown
ME = Mideast	PR = Puerto Rico & U.S. Virgin Islands	

☐ Bovine Brucellosis

Source: Dr. Mike Gilsdorf
USDA:APHIS:VS
Cattle Diseases Staff
(301) 436-4918

Reactor herd = Herd with at least one case of brucellosis confirmed by serology or culture.

Definition of State Classifications:

Class B: More than 0.25%, but less than 1.5% of all herds infected.

Class A: No more than 0.25% of all herds infected.

Free: No infected herds under quarantine during the past 12 months.

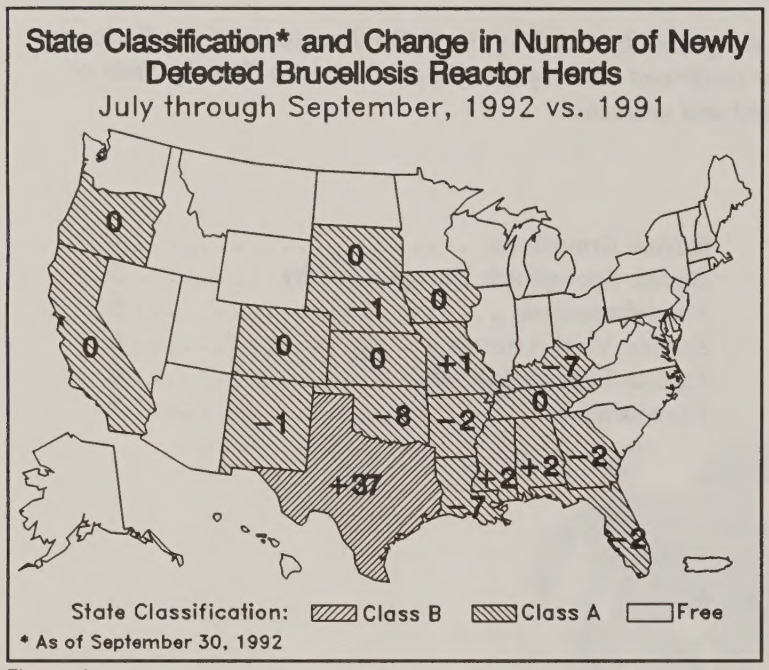

Figure 1

Illinois and Indiana have been declared free of bovine brucellosis. Alabama, Mississippi, Missouri, and Texas each had an increase in the number of newly detected brucellosis reactor herds from July through September of 1992, as compared to the same quarter of 1991. Texas had the greatest increase, with 37 more reactor herds detected as compared to the same 3-month period of the previous year (Figure 1).

For the entire U.S. there were 115 newly detected reactor herds from July through September of 1992, 12 more herds than were newly identified from July through September of 1991. Only Mississippi (13) and Texas (69) had more than 7 newly detected brucellosis reactor herds during the quarter (Figure 2).

Although there were more brucellosis reactor herds detected in the third quarter of 1992 than during the same quarter of 1991, the U.S. has had 37.3 percent fewer herds (346 vs. 552) detected during the first 3 quarters of 1992 than during the first 3 quarters of 1991 (Figure 3).

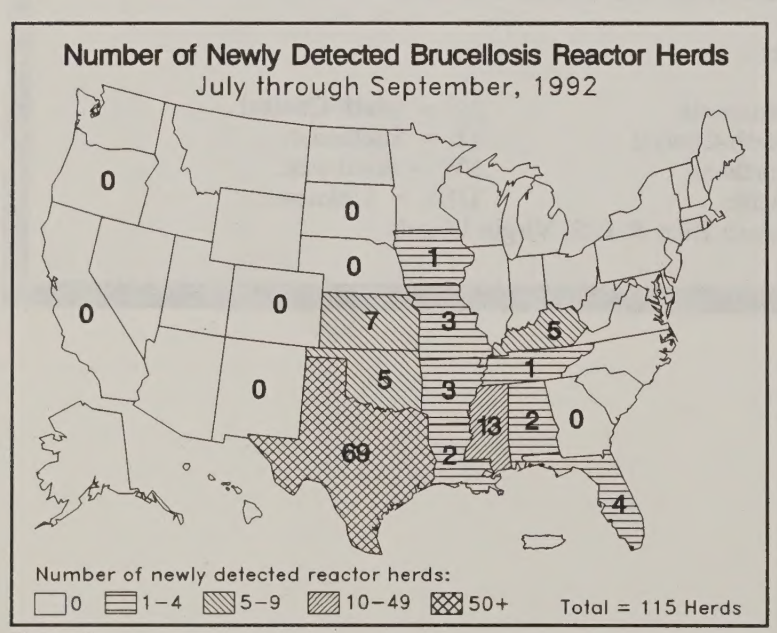

Figure 2

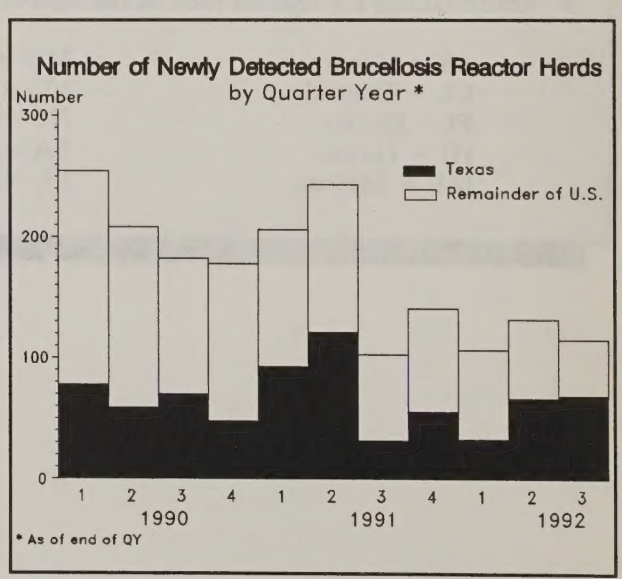

Figure 3

☐ Bovine Spongiform Encephalopathy

Sources: Dr. O. Denny, Northern Ireland
Dr. A. Doherty, Republic of Ireland
Dr. B. Hornlimann, Switzerland
Dr. J. Wilesmith, Great Britain

As of December 4, Great Britain has had almost 77,000 confirmed cases of bovine spongiform encephalopathy (BSE). About 40 percent of the dairy herds in Great Britain have been affected (Table 1).

Bovine Spongiform Encephalopathy
Descriptive Epidemiological Statistics for Great Britain*
As of December 4, 1992

Total number of confirmed cases:	76,953
Total number of affected herds:	22,105
Proportion of dairy herds affected:	39.7%
Proportion of beef suckler herds affected:	7.0%

* England, Scotland, and Wales

Table 1

Over 100 additional confirmed cases of BSE have been reported from Northern Ireland in the last 3 months, while Switzerland and the Republic of Ireland have had four cases and one case, respectively.

Other Countries Affected by BSE

Country	Imported Cases	Native Cattle	No. of Cases	Date of Last Report
Northern Ireland	Yes	Yes	584	1 Dec 92
Republic of Ireland	Yes	Yes	59	1 Dec 92
Switzerland	No	Yes	25	4 Dec 92
France	No	Yes	5	31 Jul 92
Oman	Yes	No	2	31 Jul 92
Falkland Islands	Yes	No	1	4 Sep 92
Denmark	Yes	No	1	10 Aug 92

Table 2

☐ Paratuberculosis

Criteria: Culture or histopathology

The New York State Veterinary Diagnostic Laboratory has resumed reporting paratuberculosis, accounting for the apparent increase in the number of specimens from the Northeast (NE) region tested in the second quarter of 1992 as compared to the previous 2 quarters. The Central (CL) region had the most total tests (1,175) and positive tests (116) reported for the second quarter of 1992.

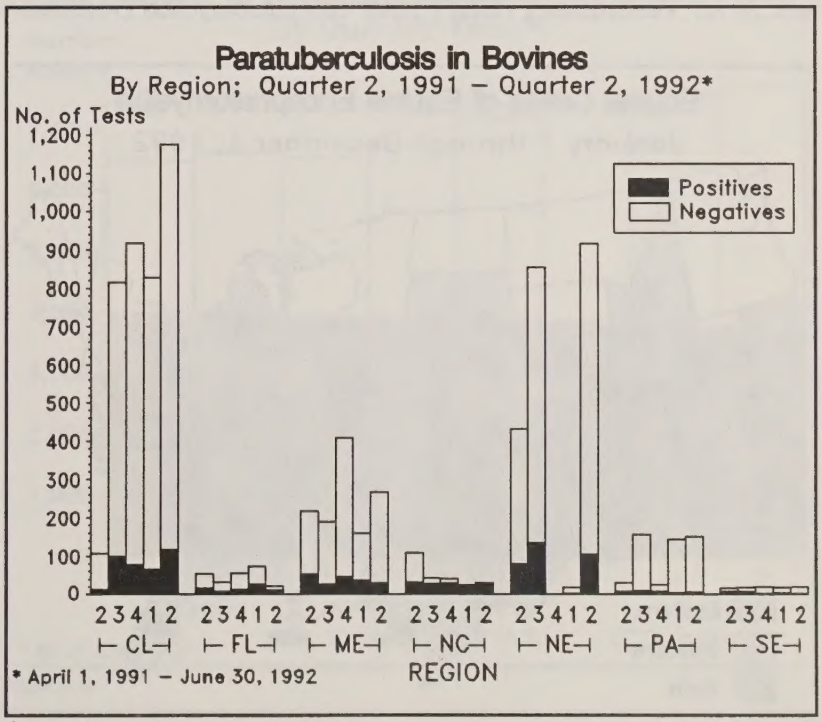

Figure 4

☐ Equine Viral Arteritis

Criteria: Virus neutralization (>1:4 titer) and no history of vaccination, or, virus isolation (tissue or semen)

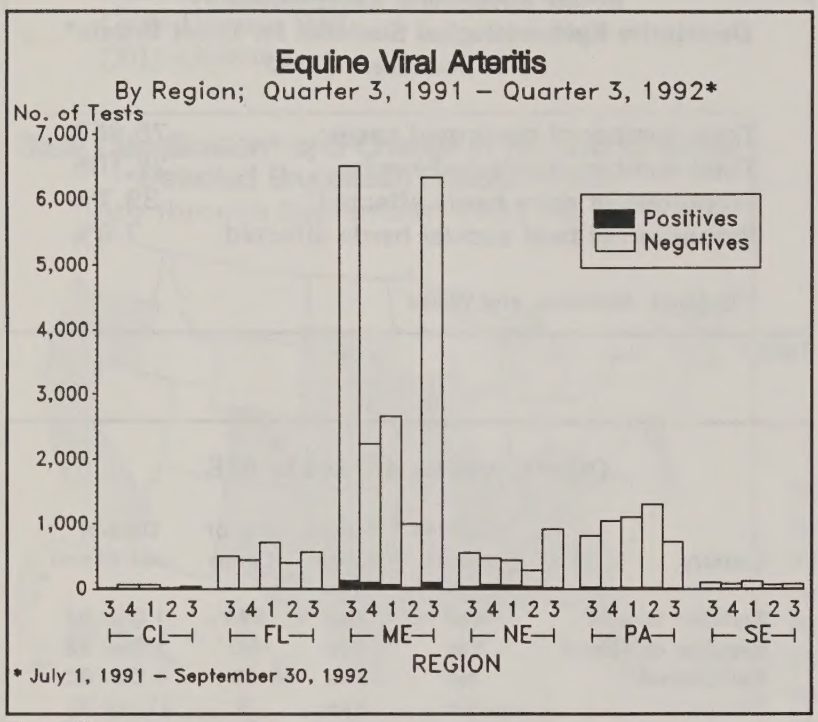

Figure 5

For all regions combined, 150 positive tests (1.7 percent of the 8,694 total tests) for equine viral arteritis were reported for the third quarter of 1992. Only 102 of 6,335 specimens from the Mideast (ME) and 4 of 721 specimens from the Pacific (PA) region were positive for EVA during the quarter.

☐ Equine Encephalomyelitis

Source: Dr. Jim Pearson, Diagnostic Virology Laboratory, National Veterinary Services Laboratories, (515) 239-8551

From January 1 through December 1, 1992, there were 343 equine diagnostic submissions examined for equine encephalomyelitis at the NVSL. Of those submissions, 27 were positive for eastern (EEE), 8 for western (WEE), and 20 for Venezuelan (VEE) equine encephalomyelitis (vaccination histories unknown).

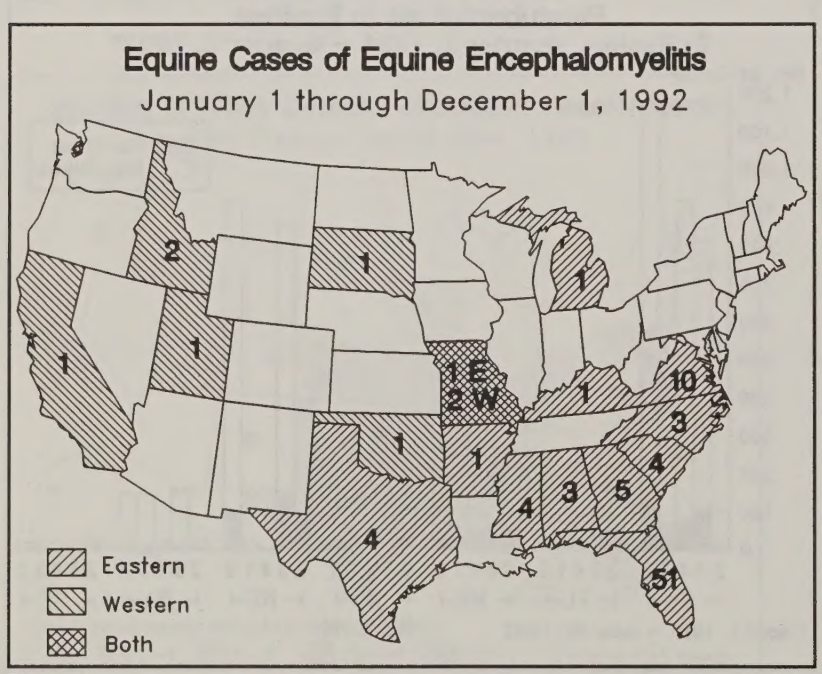

Figure 6

In addition to the equine cases, the NVSL isolated EEE from pheasants (S. Carolina) and an emu (Georgia), and WEE from three emus (two in Texas, one in Oklahoma).

Other laboratories, including the Centers for Disease Control and Prevention (CDC), have diagnosed 61 equine cases of EEE and 1 equine case of WEE. Two dogs and two emus in Georgia were also diagnosed with EEE.

While the occurrence of EEE as far west as Brownsville, Texas, is unusual, the overall number of equine cases of EEE (88) and WEE (8) is relatively low compared to recent years.

The number of human cases also is lower than usual. Thus far in 1992, two human cases of EEE (one in Massachusetts and one in Florida) have been reported in the U.S.

☐ Pseudorabies

Source: Dr. Joe Annelli
USDA:APHIS:VS
Swine Health Staff
(301) 436-7767

Hawaii, New York, and Wyoming advanced to Stage IV, and Missouri to Stage II, between March 31 and June 30, 1992. A total of 787 swine herds were detected with pseudorabies during the second quarter of 1992. That was 35 percent more newly detected herds than during the same period in 1991, but 0.3 percent fewer than during the first quarter of 1992.

The 411 newly detected herds in Iowa were fewer herds than were detected in any of the last 3 quarters in that State. The number of newly detected herds in Iowa has decreased in each of the last 3 quarters.

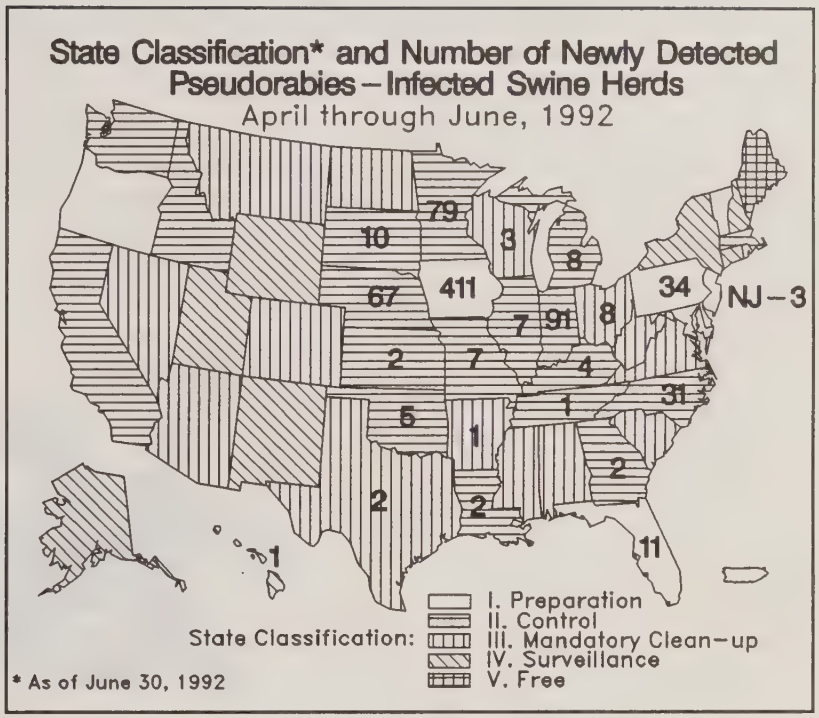

Figure 7

Iowa now has 51.4 percent of all the known pseudorabies-infected swine herds in the U.S. (3,961/7,713). While the total number of known infected herds in the U.S. has increased by 13.7 percent over the last year (7,713 vs. 6,786), the total number in States other than Iowa has decreased during that period (3,752 vs. 3,890).

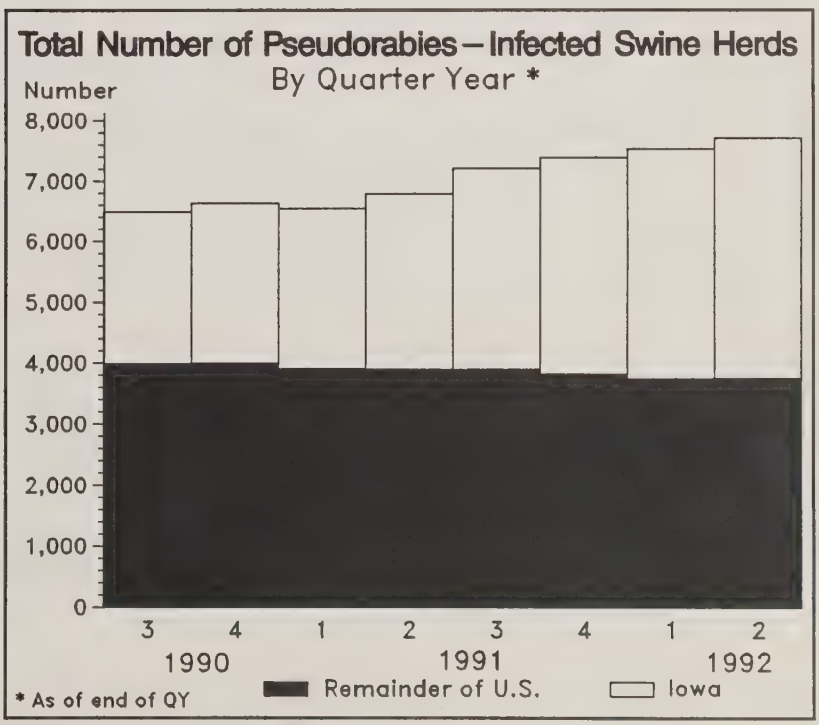

Figure 8

II. Etiologic Agents Associated with Calf Diarrhea

Section II characterizes agents most commonly associated with diarrhea in calves (8 weeks of age or less) from accessions reported to veterinary diagnostic laboratories.

Key to Figures in this Section:

- In some cases, the reported number of negative tests performed is a minimum because some laboratories were not able to determine the total number of negative tests performed.
- Data totals (positives and negatives) shown for "All Calves" include specimens of unknown bovine class and those from veal calves, in addition to specimens from beef or dairy calves. Thus, the sums of dairy calf totals and beef calf totals do not always equal the totals shown for all calves.
- Data are presented by region of specimen origin and quarter year of specimen submission.
- Abbreviations for regions used in the figures are:

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☐ *Campylobacter* spp.

Criterion: Culture

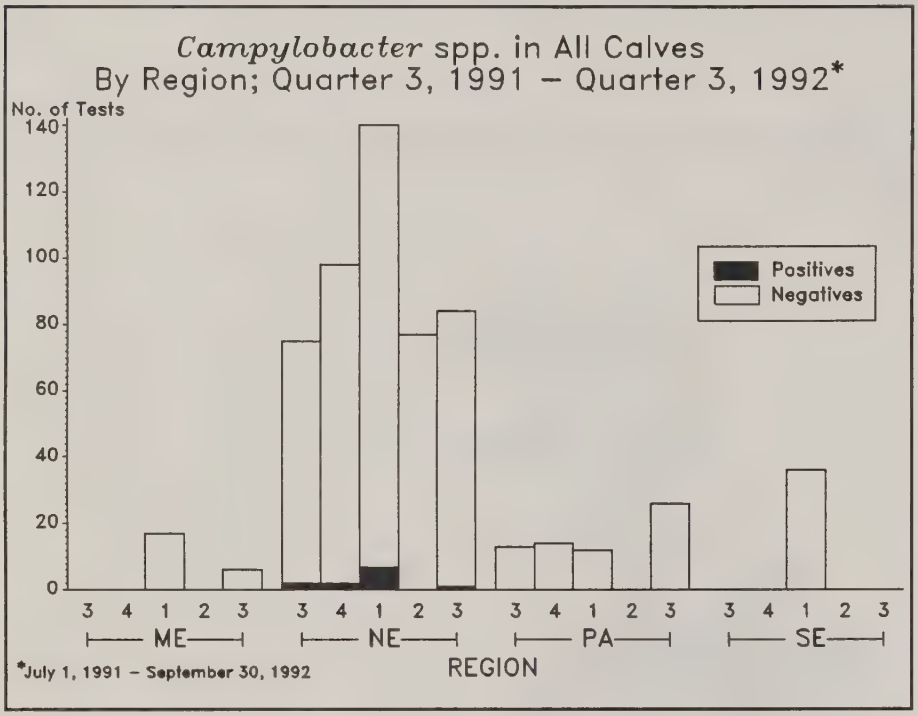

Figure 9

Only 1 of the 116 calf specimens tested for *Campylobacter* spp. was positive in the third quarter of 1992. Through the third quarter of 1992, 8 of 402 specimens tested have been positive. All positives have been from the Northeast (NE) region.

☐ *Clostridium perfringens* Type C

Criteria: Gross and histopathologic exam

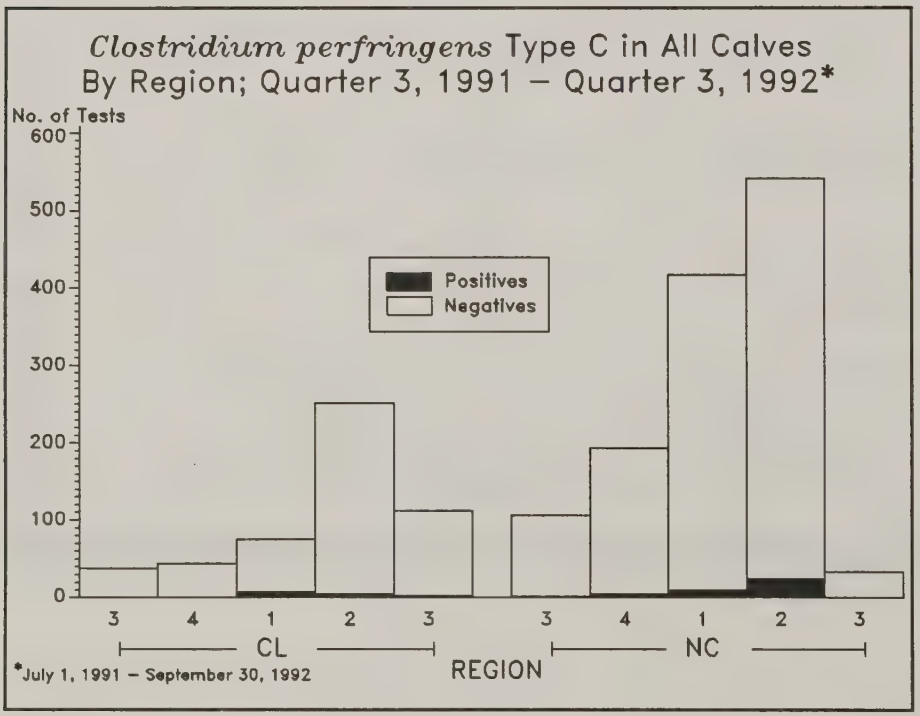

Figure 10

The Central (CL) and North-Central (NC) were the only regions which had more than three calf specimens tested for *Clostridium perfringens* type C during the third quarter of 1992. Three specimens were found positive, two from the CL region and one from the Pacific (PA).

☐ *Escherichia coli*

Criteria: Culture from intestine and demonstration of at least one virulence characteristic such as: adhesive antigens, bacterial adherence, or enterotoxin

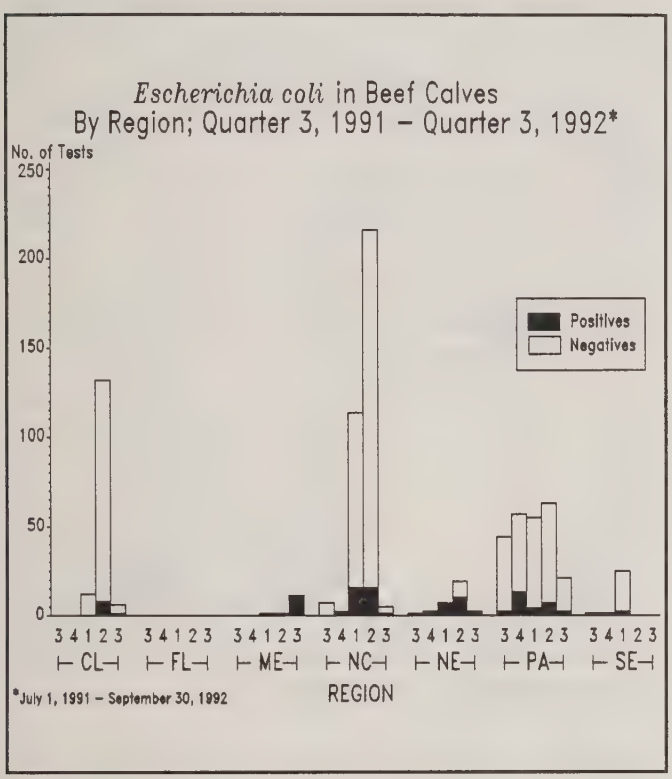

Figure 11

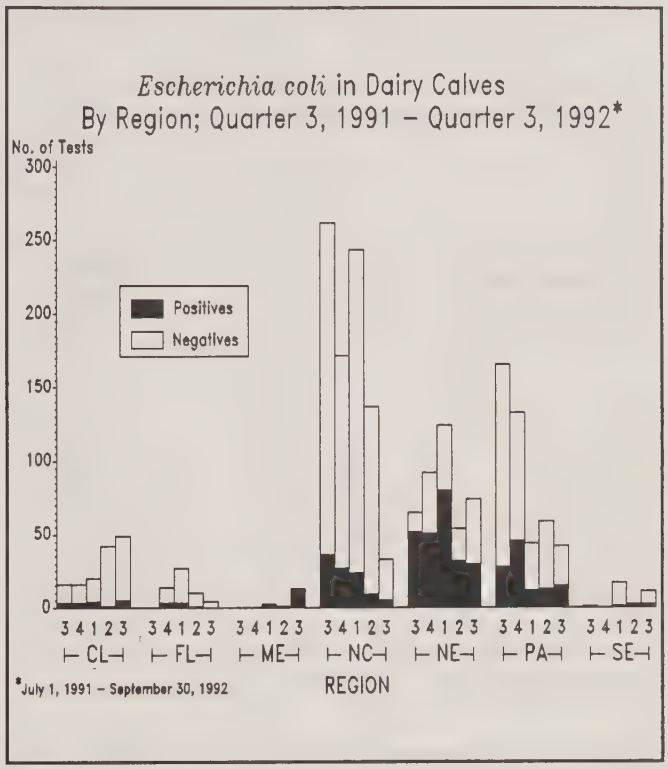

Figure 12

Of the 45 beef calf specimens tested for *E. coli* in the third quarter of 1992, 16 were positive. For all calves, the Northeast (NE) region had the most positive specimens (33). The number of *E. coli* positive specimens for all calves was generally lower in all regions as compared to last quarter. The exception was the Mideast (ME) region where an increase in positive specimens was reported (see "Note" below).

NOTE: Due to an error in a statement of the criteria (case definition) to be used for *E. coli* reporting, an erroneously high number of positive and total tests have been reported for the ME region. Thus, some of the *E. coli* data reported for the ME region in tables and figures of previous issues of the DxMONITOR were deleted from this issue. The data (all class = unknown) deleted were: QY 4, 1991 - 6 positives, 6 total tests; QY 1, 1992 - 52 positives, 55 total tests; and QY 2, 1992 - 46 positives, 48 total tests.

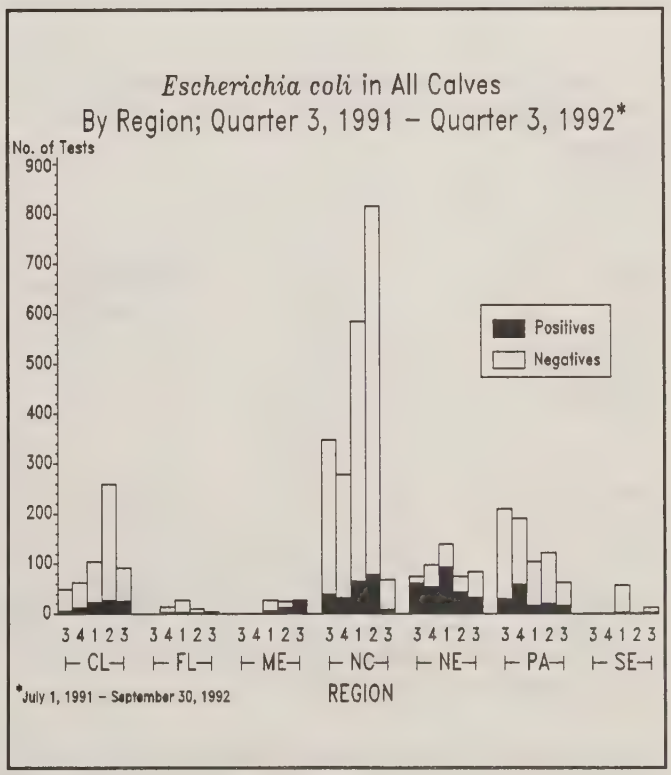

Figure 13

☐ *Salmonella* spp.

Criterion: Culture (serotype identification encouraged)

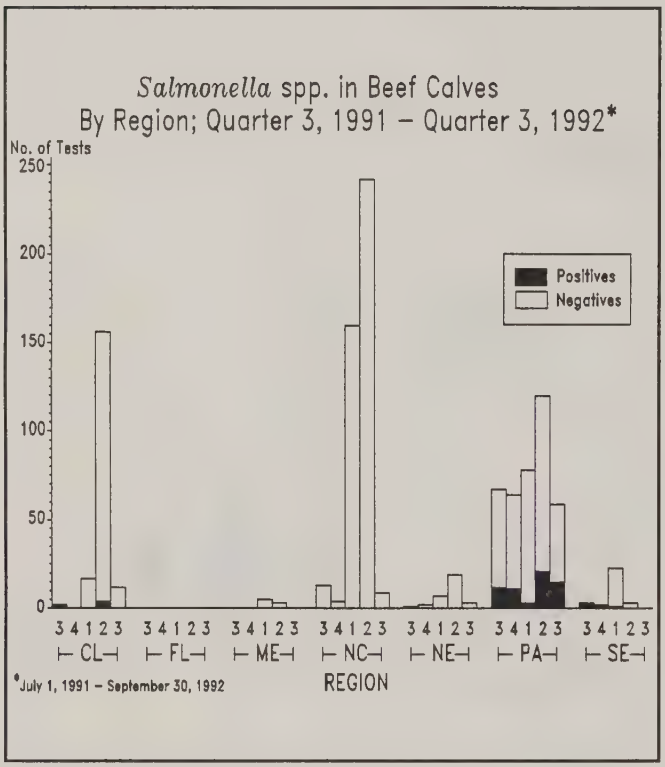

Figure 14

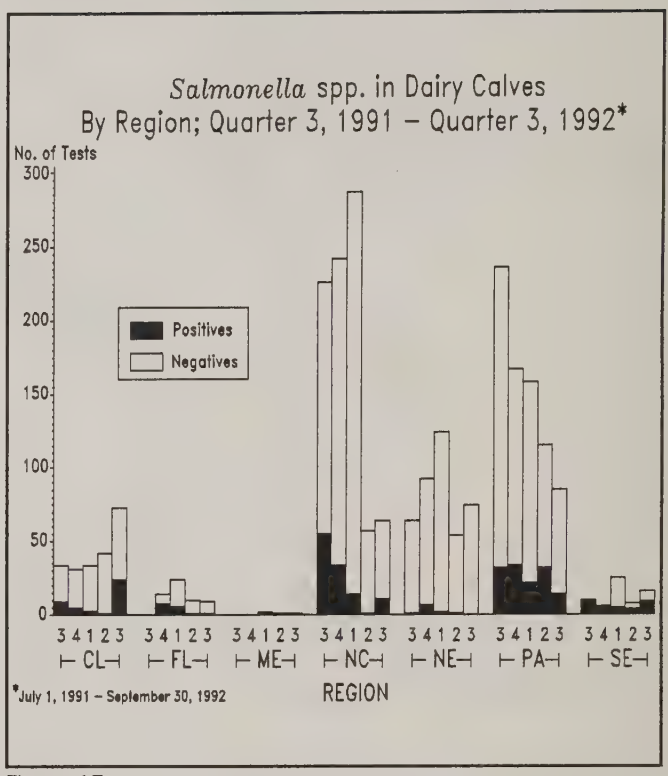

Figure 15

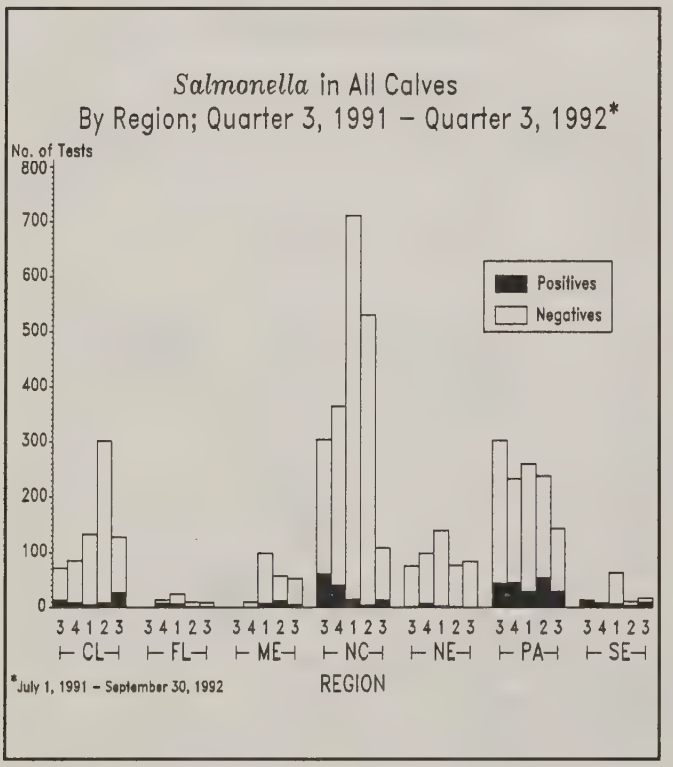

Figure 16

More specimens from the Pacific (PA) and Central (CL) regions were found positive for *Salmonella* spp. than for other regions of the U.S. during the third quarter of 1992. The CL region had the most positive dairy calf specimens (24), while the PA region had the most positive beef calf specimens (15).

The most common serotype reported for dairy specimens was *S. dublin*, and the most common for beef calf specimens was *S. typhimurium*.

Salmonella Serotypes

Region	Class	Serotype	No. Reported
PA	Beef	*S. agona*	1
PA	Beef	*S. typhimurium*	8
PA	Beef	*S. dublin*	2
PA	Dairy	*S. typhimurium*	4
PA	Dairy	*S. dublin*	8
CL	Dairy	*S. typhimurium*	3
CL	Dairy	*S. dublin*	2
CL	Dairy	*S. kentucky*	2
CL	Dairy	*S. enteritidis*	2

Table 3

☐ Bovine Viral Diarrhea Virus

Criteria: Virus isolation, or, positive FA (any tissue) with histologic lesions

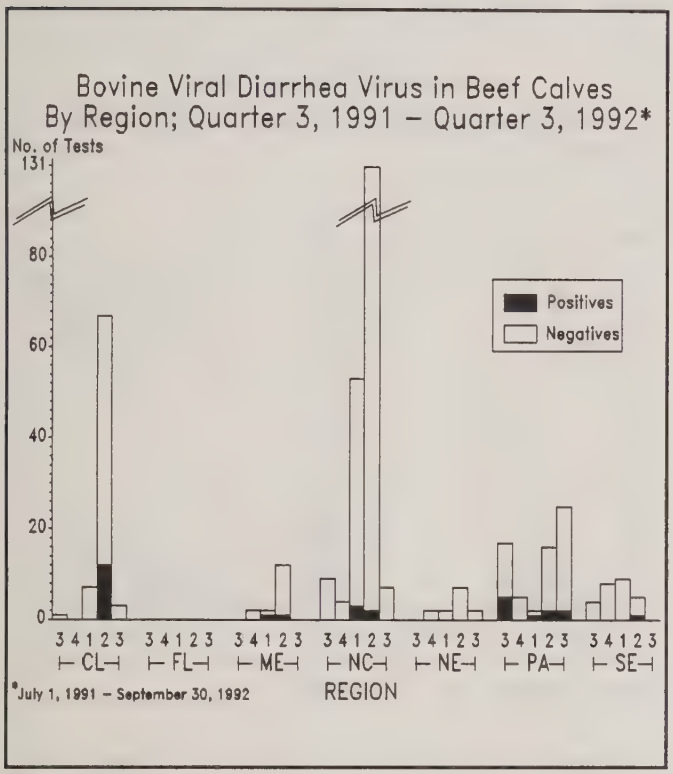

Figure 17

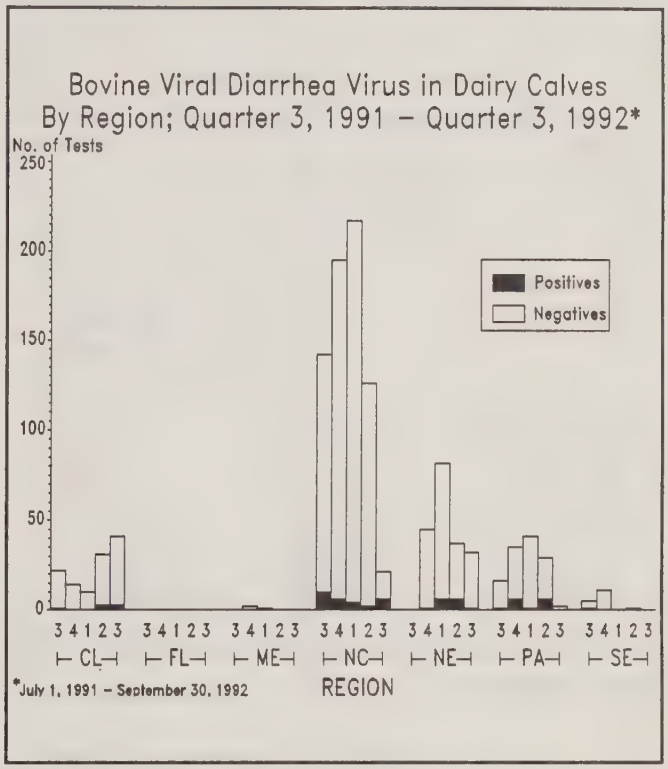

Figure 18

For the third quarter of 1992, 16 total specimens were reported positive for bovine viral diarrhea (BVD) virus. None of the 282 tests on Mideast (ME) region specimens were positive for BVD virus. Overall, 3.3 percent of all tests were positive for BVD virus in the third quarter.

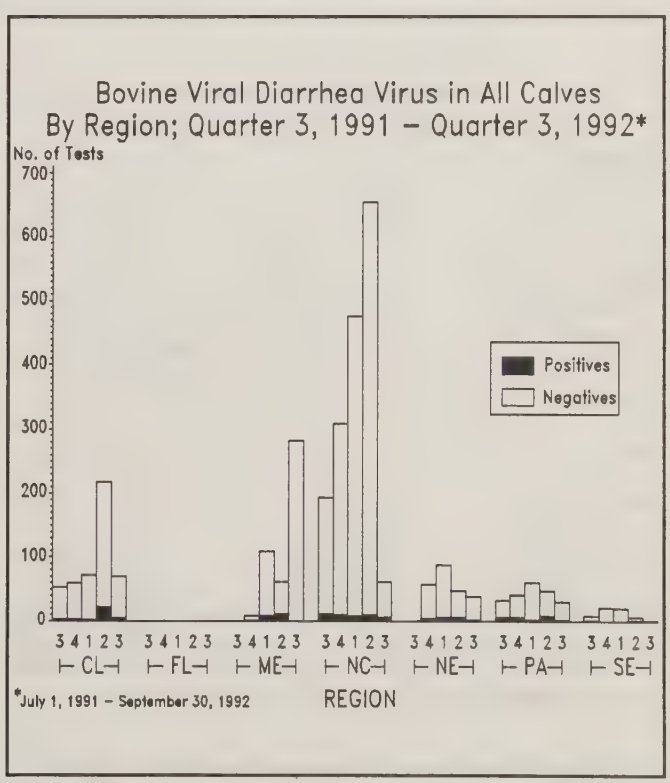

Figure 19

☐ Coronavirus

Criteria: Antigen by FA or ELISA, or, electron microscopy of feces/intestinal contents

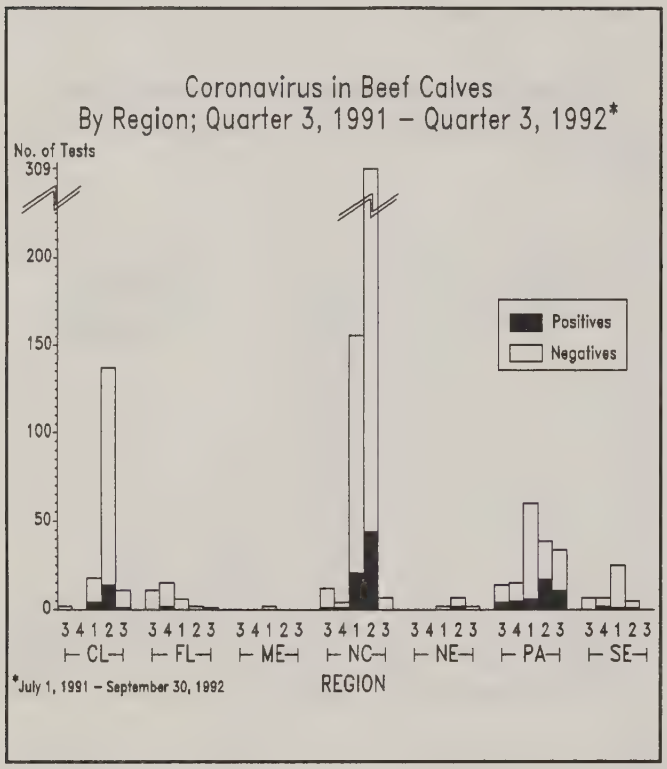

Figure 20

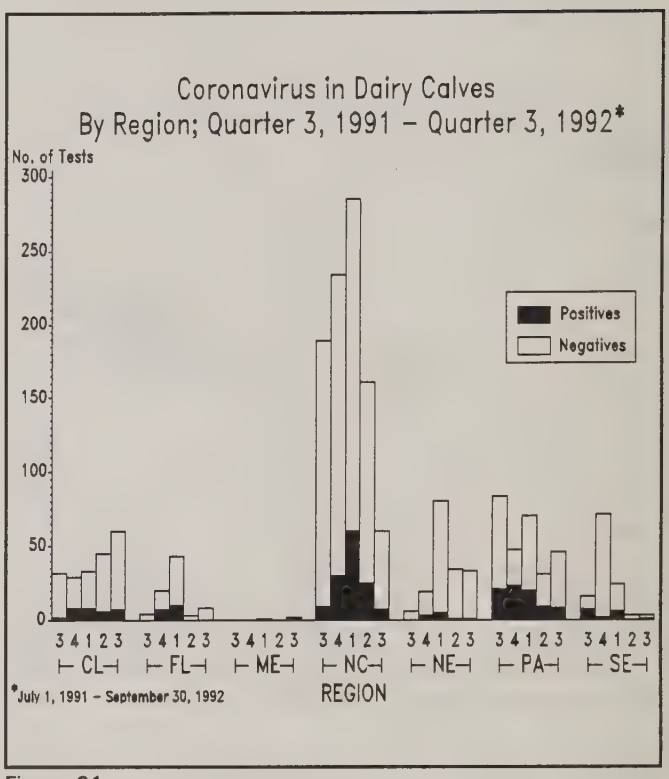

Figure 21

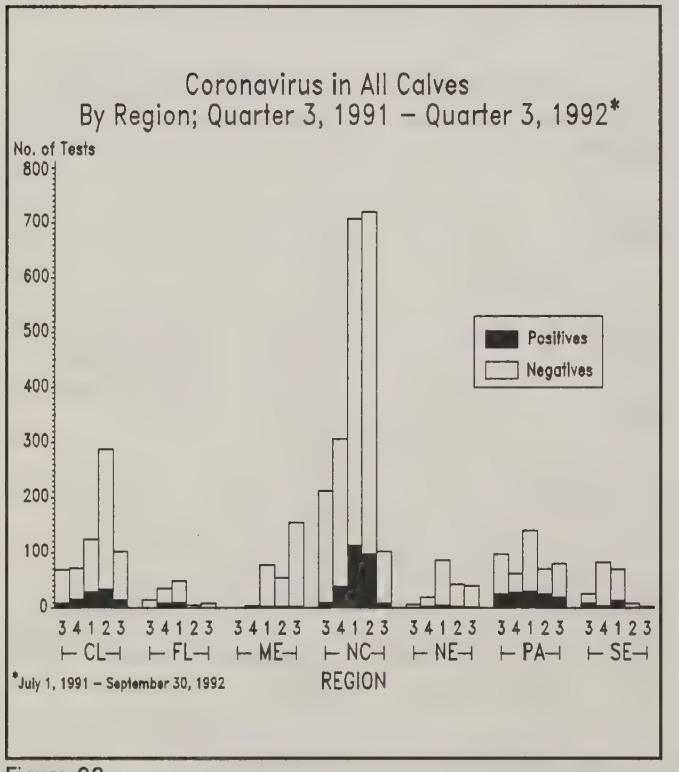

Figure 22

A seasonal pattern in the reporting of coronavirus is evident in some regions (CL, NC) of the U.S., especially for beef calf specimens. Much or all of this pattern may be due to increased calving activity in the spring (first and second quarters) of the year in those areas.

The number of positive tests for coronavirus from both beef and dairy calf specimens was down from last quarter. There was an equal or lesser number of beef calf specimens found positive for coronavirus in every region of the U.S. as compared to last quarter. In general, the third quarter of each year has had the fewest coronavirus positive specimens.

☐ Rotavirus

Criteria: Antigen by FA or ELISA, or, electron microscopy of feces/intestinal contents

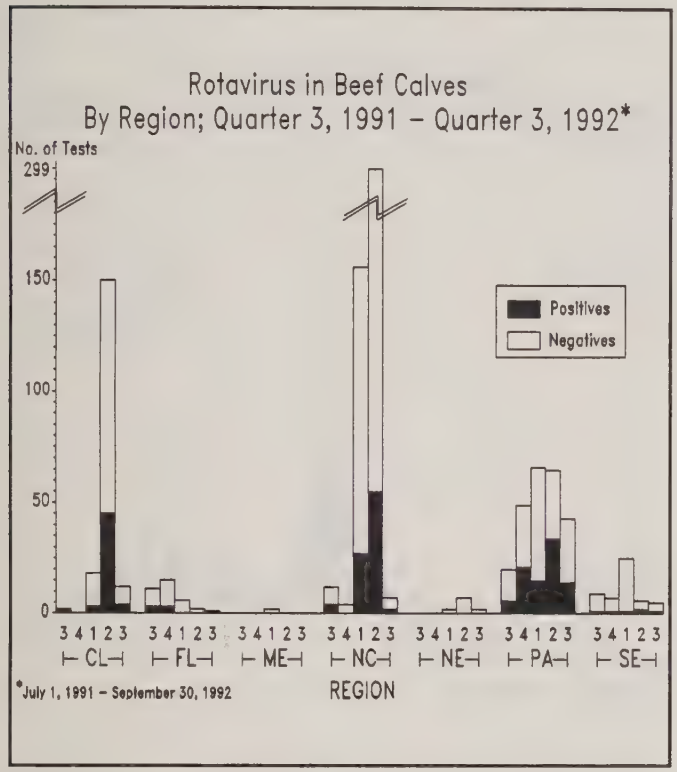

Figure 23

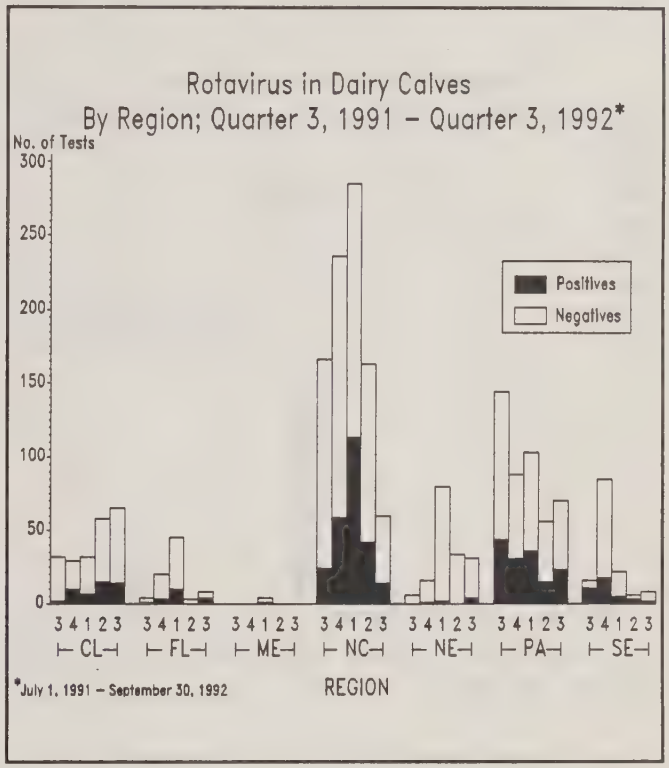

Figure 24

A seasonal pattern is evident in the detection of rotavirus in some regions (CL, NC), especially for beef calf specimens. An increased number of positive specimens have been reported during the spring calving season (first and second quarters), although the percentage of tests positive is not necessarily higher in the spring.

The third quarter of 1992 had fewer positive tests reported for rotavirus in beef calf specimens than did the second quarter (21 vs. 136). There were also fewer positive tests for rotavirus from dairy calf specimens in the third quarter than during the second quarter (61 vs. 75). With the exception of dairy calf specimens from the Pacific (PA) region, the third quarter of the year has generally had fewer findings of rotavirus in each region for all calf specimens combined.

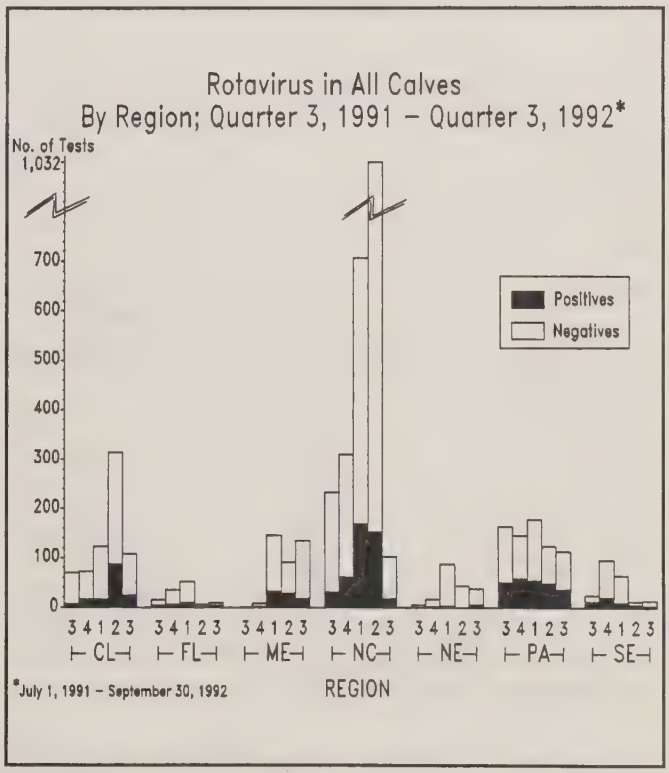

Figure 25

☐ Cryptosporidia

Criteria: Parasitologic or histopathologic exam

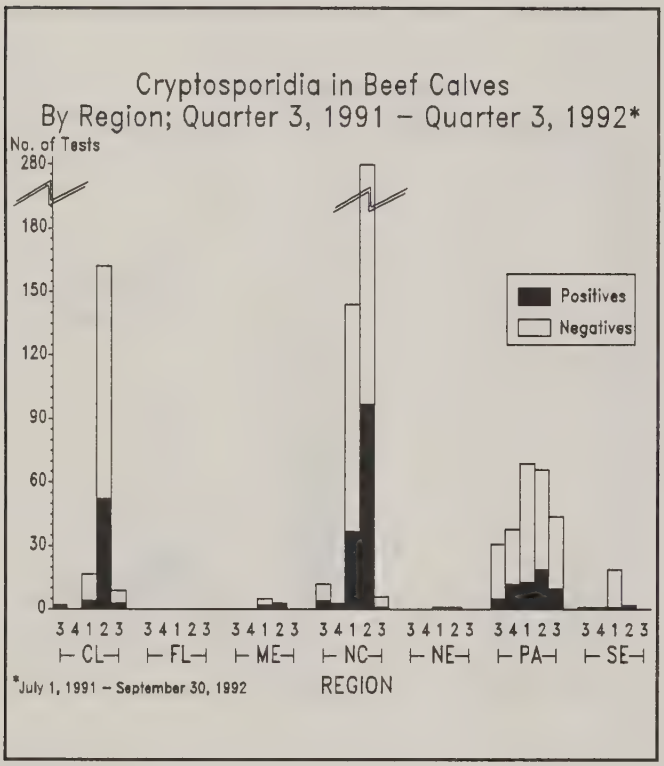

Figure 26

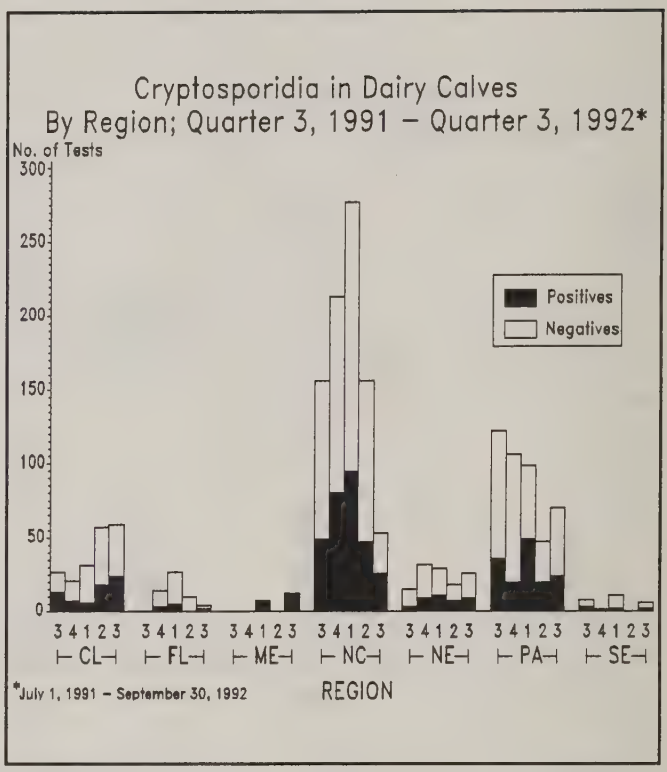

Figure 27

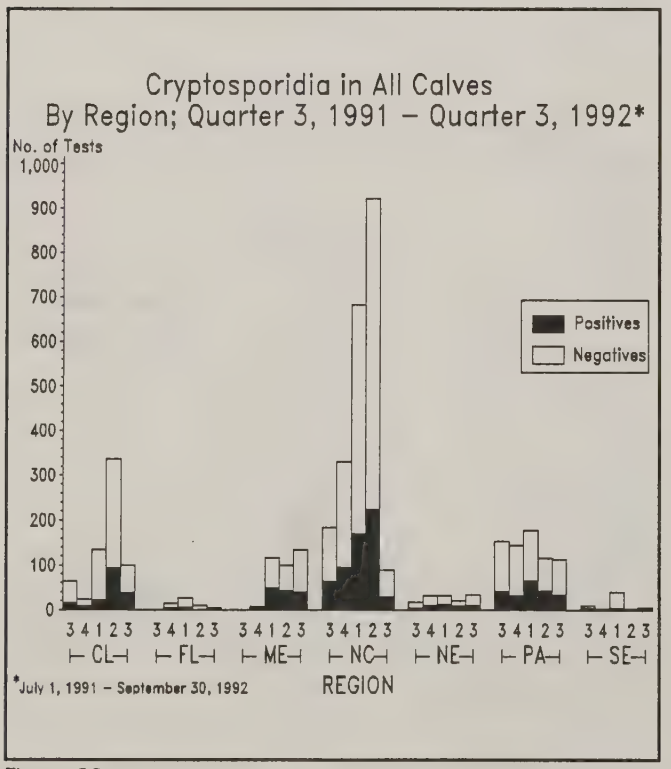

Figure 28

There were fewer positive tests for cryptosporidia from beef calf specimens reported for the third quarter of 1992 than for the second quarter (14 vs. 172). There were more positive tests from dairy calf specimens than during the previous quarter (98 vs. 92). Overall, there were 38 percent as many positive tests (155 vs. 411) for cryptosporidia in the third quarter as in the second.

☐ Coccidia

Criteria: Parasitologic or histopathologic exam

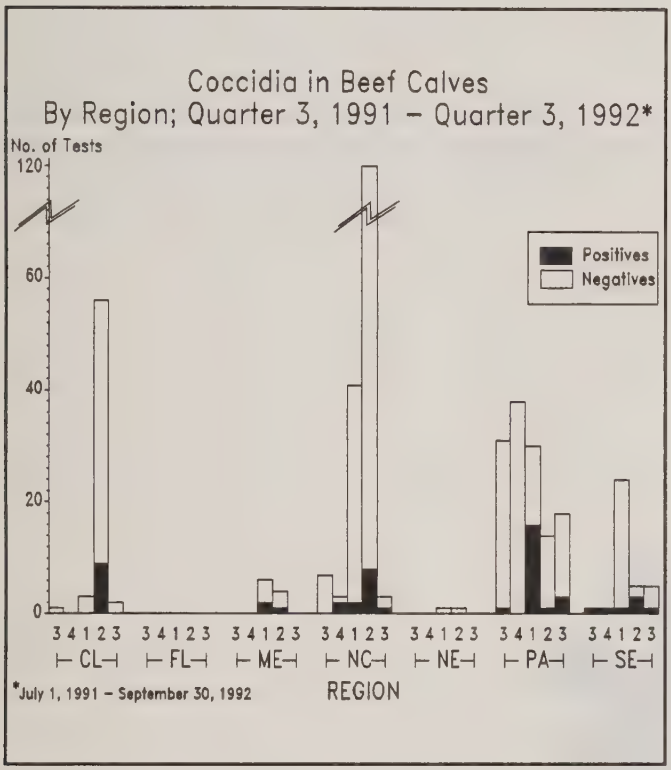

Figure 29

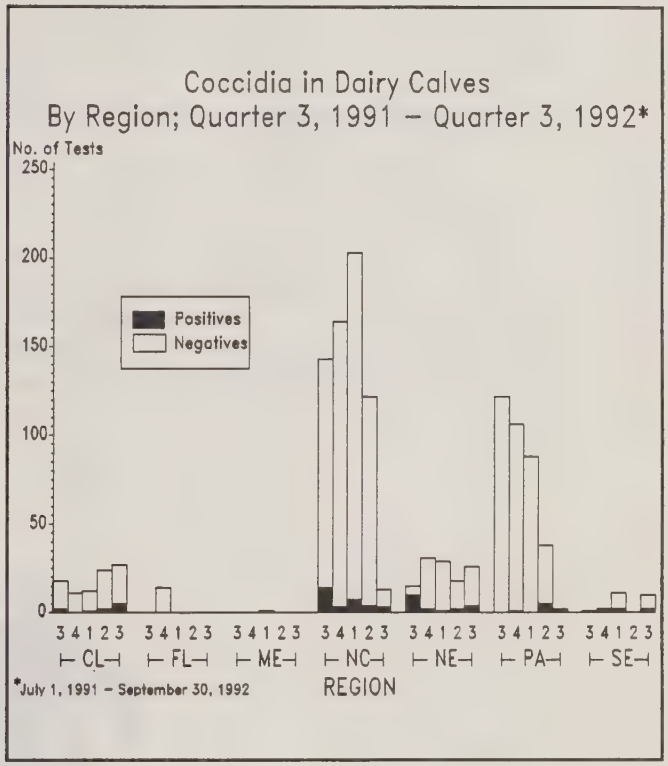

Figure 30

Overall, there were 31 positive tests for coccidia reported from all calf specimens for the third quarter of 1992. Specimens from the Northeast (NE) region had the most positive tests (10). There were more positive tests from dairy calf specimens than from beef calf specimens (16 vs. 5).

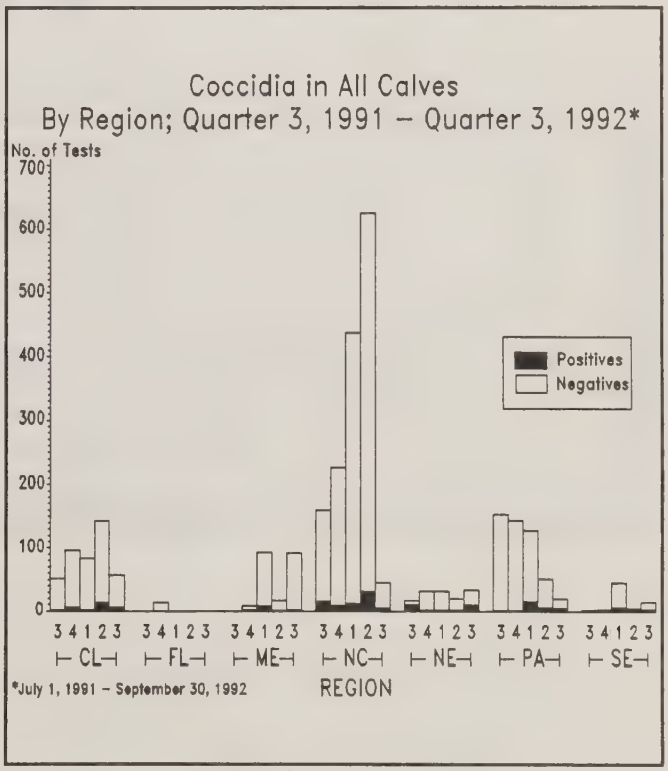

Figure 31

III. Etiologic Agents Associated with Piglet Diarrhea

Section III characterizes agents most commonly associated with diarrhea in piglets (8 weeks of age or less) from accessions reported to veterinary diagnostic laboratories.

Key to Figures in this Section:

- In some cases, the reported number of negative tests performed is a minimum because some laboratories were not able to determine the total number of negative tests performed.
- Data are presented by region of specimen origin and quarter year of specimen submission.
- Abbreviations for regions used in the figures are:

AK = Alaska	MN = Mountain	SC = South-Central
CL = Central	NC = North-Central	SE = Southeast
FL = Florida	NE = Northeast	SW = Southwest
HI = Hawaii	PA = Pacific	UNK = Unknown
ME = Mideast	PR = Puerto Rico & U.S. Virgin Islands	

☐ *Clostridium perfringens* Type C

Criteria: Gross and histopathologic exam

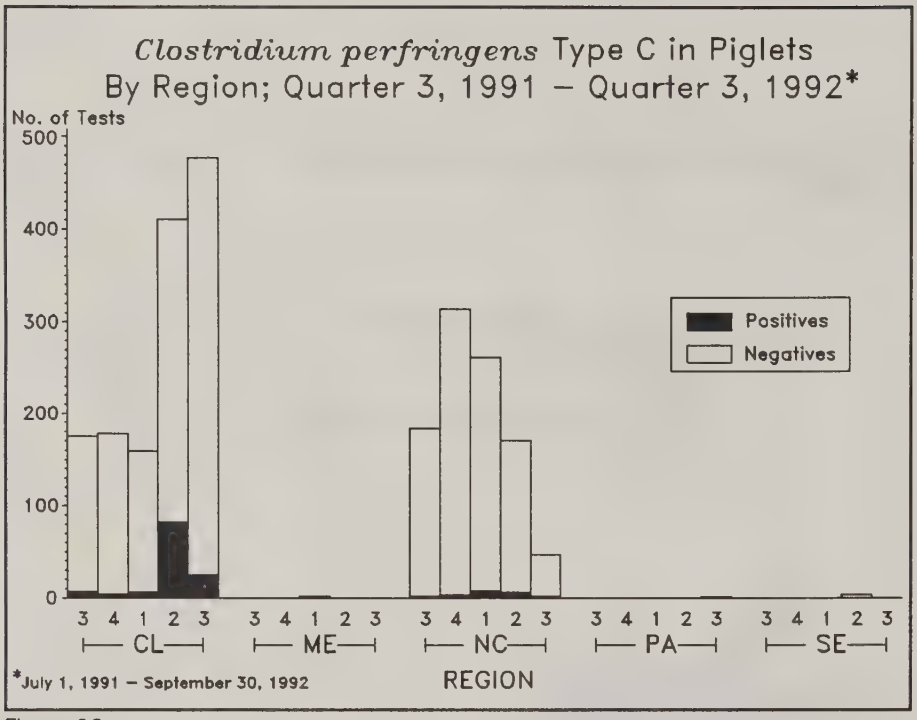

Figure 32

All but 1 of the 28 piglet specimens positive for *Clostridium perfringens* type C during the third quarter of 1992 were from the Central (CL) or North-Central (NC) region. This was the first quarter in which a positive specimen has been reported from a region (the Pacific) other than the CL or NC.

☐ *Escherichia coli*

Criteria: Culture from intestine and demonstration of at least one virulence characteristic such as: adhesive antigens, bacterial adherence, or enterotoxin

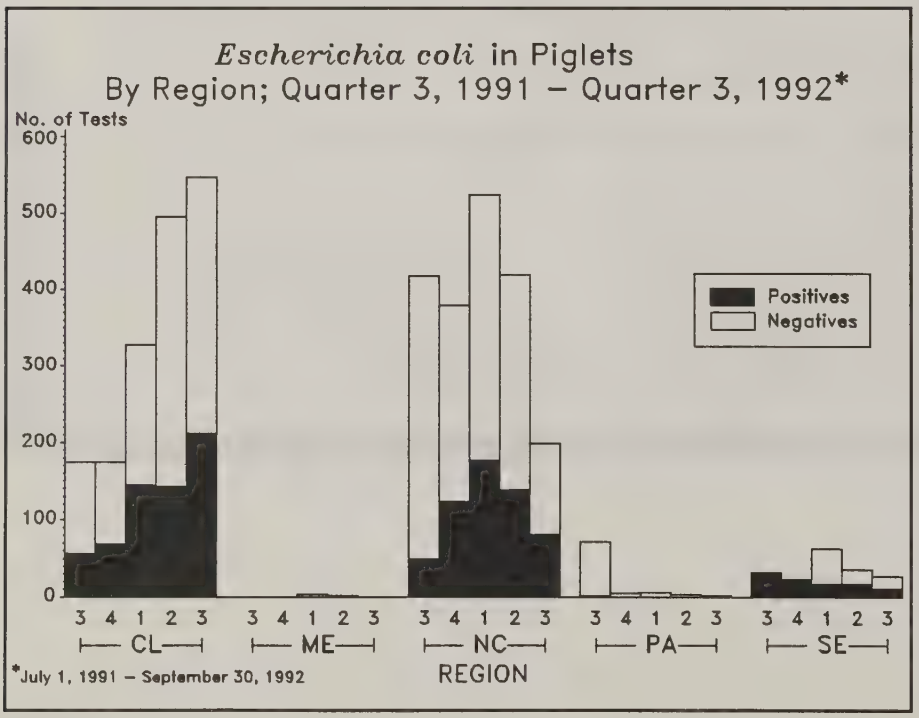

Figure 33

For the fifth quarter in a row, the Central (CL) and North-Central (NC) regions had the most piglet specimens reported positive for *E. coli* (212 and 81, respectively).

NOTE: Due to an error in a statement of the criteria (case definition) for *E. coli* reporting, an erroneously high number of positive and total tests have been reported for the Mideast (ME) region. Thus, some of the *E. coli* data reported for the ME region in tables and figures of previous issues of the DxMONITOR were deleted from this issue. The data deleted were: QY 4, 1991 - 14 positives, 14 total tests; QY 1, 1992 - 49 positives, 50 total tests; and QY 2, 1992 - 31 positives, 33 total tests.

☐ Rotavirus

Criteria: Antigen by FA or ELISA, or, electron microscopy of feces/intestinal contents

No region had more piglet specimens reported as positive for rotavirus in the third quarter of 1992 than in the previous quarter. Specimens from the Central (CL) region accounted for 108 of the 134 total positives.

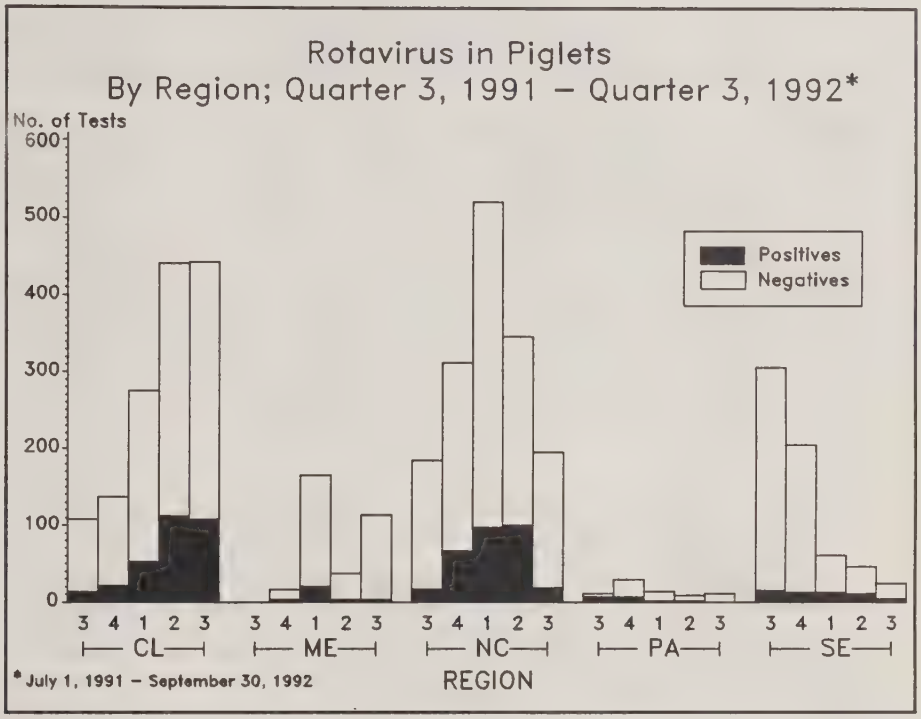

Figure 34

☐ Transmissible Gastroenteritis Virus

Criteria: Antigen by FA, or, electron microscopy

Fewer piglet specimens were reported to have been positive for transmissible gastroenteritis (TGE) virus in the third quarter than in the second quarter. There were 47 positive tests for TGE virus for all regions, as compared to 77 for the second quarter of 1992 and 146 for the first quarter.

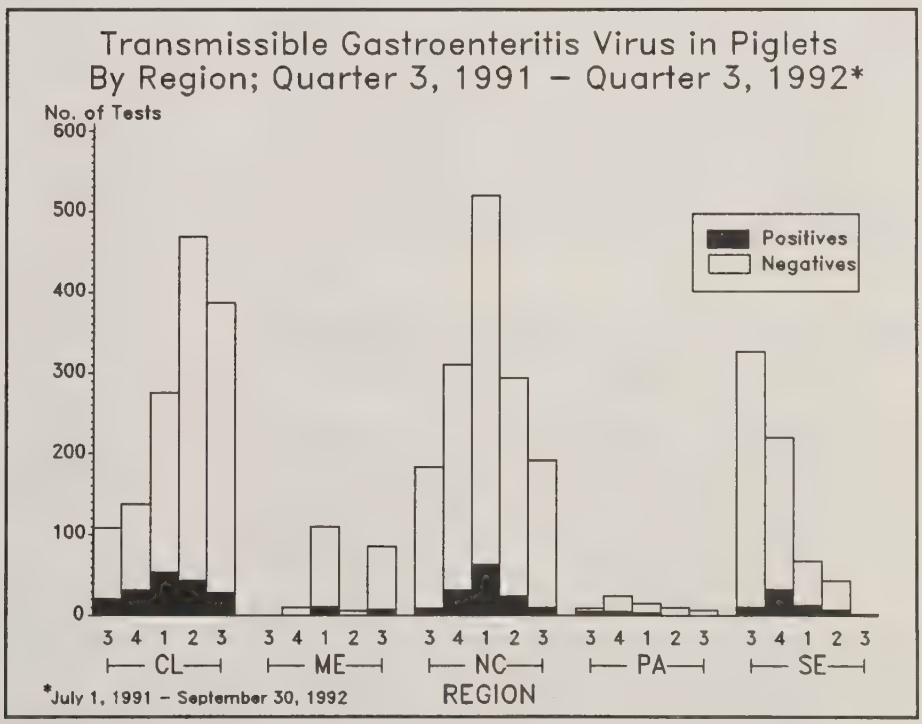

Figure 35

☐ Coccidia

Criteria: Parasitologic or histopathologic exam

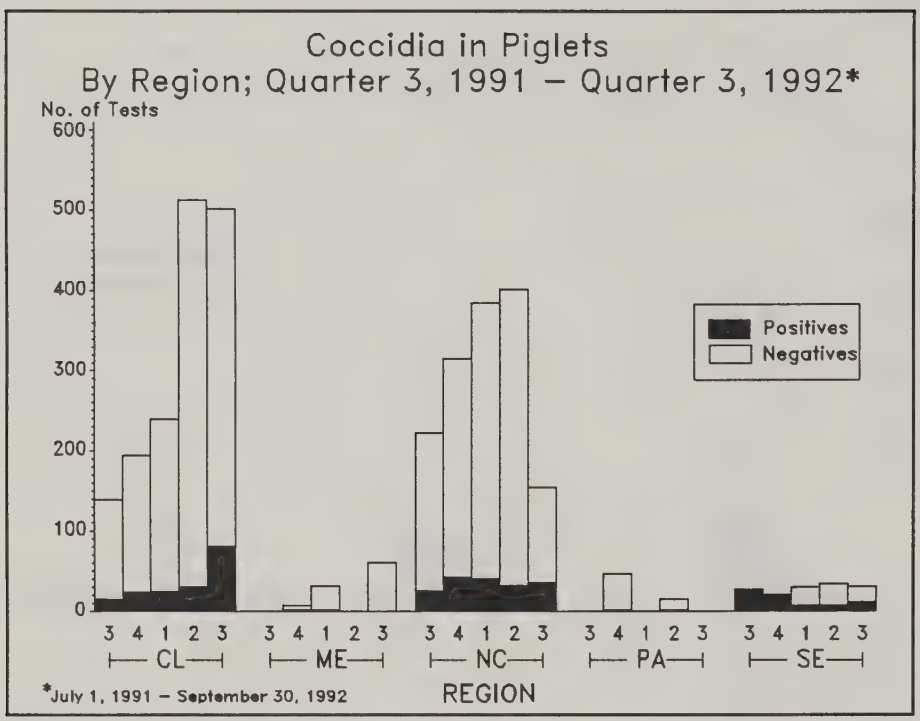

Figure 36

The three regions which had specimens reported positive for coccidia all had more positives in the third quarter than in the second quarter. Central (CL) region specimens were positive more than twice as often as last quarter (16% vs. 6%). For all regions combined, there were 128 positive tests in the third quarter of 1992 as compared to 74 in the second quarter of 1992.

DxNEWS

This section contains news items and articles of potential interest to diagnostic laboratories. Submissions from nonparticipating laboratories are welcome.

Changes to VDLRS and DxMONITOR Made at AAVLD/USAHA Annual Meeting

Several important changes were recently made to the Veterinary Diagnostic Laboratory Reporting System (VDLRS) and the DxMONITOR Animal Health Report at the 1992 annual meetings of the American Association of Veterinary Laboratory Diagnosticians (AAVLD) and the United States Animal Health Association (USAHA) in Louisville, Kentucky.

The meeting of the Animal Disease Reporting Sub-Committee (ADRS) of the AAVLD made a recommendation to incorporate the DxMONITOR Planning Committee into the ADRS. The ADRS will be responsible for the yearly planning of the VDLRS. The chairman of the ADRS will name the members of the DxMONITOR Editorial Review Group (formerly called the Editorial Board). Veterinary Services of the USDA:APHIS will continue to coordinate the DxMONITOR Animal Health Report and will implement changes made by the ADRS.

The Committee on Animal Disease Surveillance and Animal Health Information Systems of the USAHA appointed a liaison member to serve on the ADRS. A resolution was passed by USAHA which will request that the USDA provide grant money to laboratories participating in the VDLRS. Also, various committees of the USAHA will provide input as to what diagnoses should be reported within the VDLRS.

Over 30 people representing at least 21 laboratories discussed the upcoming year at the DxMONITOR Planning Committee meeting. Changes agreed upon included: drop *Campylobacter* spp. reporting; add "other viruses" to the calf and piglet diarrheal agents; add more types of paratuberculosis (PTB) tests to the case definition; report leukosis and PTB by class of bovine (beef, dairy, etc.); add reporting on brain histopathology from bovine neurologic cases (BSE surveillance); and add a section on agents associated with bovine abortion (only *Neospora* spp. initially).

A major change will also be made in the way etiologic agents associated with calf or piglet diarrhea will be reported. The total number of accessions for calf or piglet diarrhea will be reported as a single "denominator". The number of those accessions which were found positive for each of the given agents will be reported as "numerators". No data on numbers or types of tests will be reported, as long as the case definition is followed.

The reasoning behind the new protocol is that one accession may have multiple specimens positive for a given test, but they really represent only one occurrence of the agent. Also, diagnosticians must use their judgment on each accession to determine which tests to perform. Thus, knowing numbers of negative or positive tests is not very meaningful. What is really of interest is, "of all the accessions for diarrhea, how many were positive for a given agent?" This new protocol will answer that question.

Laboratories participating in the VDLRS will be notified as to when they should implement the changes discussed. The DxMONITOR Data Submission System (DDSS) will be modified to accommodate all changes. In addition, the ability to accept *Salmonella* serotype data and "free text" will also be programmed into the DDSS.

The appendix of the DxMONITOR will continue, but data will be reported by laboratory (not region) and will be for a full year (not just one quarter). Thus each diagnosis/agent will have data reported in the appendix once each 12 months.

Goals for 1993 will include encouraging participation in the VDLRS, formation of a bulletin board for the participants (probably an e-mail system), asking USDA and FDA for grant money for laboratories participating in the VDLRS, and formalizing the DxMONITOR Planning Committee within AAVLD (this goal has been met by the action of the ADRS). ■

Manual of Standards for Diagnostic Tests and Vaccines Available from OIE

The Office International des Epizooties (OIE), an international animal health organization comprised of the Veterinary Services of 126 countries, has recently published a combined and updated *Manual of Standards for Diagnostic Tests and Vaccines.* The purpose of the manual is to contribute to the harmonization of methods of surveillance and control of important animal diseases, and to facilitate trade in animals and their products. Standard methods are described for laboratory diagnostic tests and the production and control of veterinary biologics.

The manual consists of 90 chapters and 823 pages. Each chapter was written and revised by international experts and approved by the Veterinary Services of all the OIE Member Countries. Each chapter is devoted to a single disease or to two or three closely related diseases. Each chapter has a summary intended for veterinary officials, which is followed by a text intended for laboratory workers, giving details of diagnostic tests and, where appropriate, the requirements for vaccines or other biological products. Bibliographic references are included in each chapter.

The cost of the manual is $140 plus $12 shipping (to U.S.). Payment may be by personal check, money order, VISA, or MasterCard. If a credit card is used the card number, expiration date, and signature of the card holder should be included with the order. Address orders to Office International des Epizooties, 12 rue de Prony, 75017 Paris, France. ■

1993 Membership Application

American Association of Veterinary Laboratory Diagnosticians, Inc.

P.O. Box 6023, Columbia, MO 65205/Telephone (314) 882-6811

The purpose of the American Association of Veterinary Laboratory Diagnosticians is the dissemination of information relating to the diagnosis of animal disease, the coordination of the diagnostic activities of regulatory, research and service laboratories, the establishment of uniform diagnostic techniques and the establishment of accepted guides for the improvement of diagnostic laboratory organizations relative to facilities, equipment, and personnel qualifications.

Any laboratory worker engaged in the field of animal disease diagnosis or in allied fields involving teaching, research, commercial, or regulatory functions is eligible for membership and is invited to join.

☐ Full Member $40.00: Annual Membership Dues
☐ Graduate Student/Resident Member $25.00: Annual Membership Dues

Please remit in U.S. dollars. Outside the USA, remit by draft on a U.S. bank or by International Postal Money Order.

Dues include a subscription to the *AAVLD Newsletter*, an AAVLD membership roster, and the *Journal of Veterinary Diagnostic Investigation*.

Please return this application with your check or money order.

Name_____ Degree_____

Institution/Lab_____

Address_____

City_____ State_____

ZIP_____ Country_____

Office phone_____ Fax_____

Interest/specialty_____

Free Data Submission Software Available

The DxMONITOR Data Submission System (DDSS) is available free of charge to any laboratory interested in participating in the Veterinary Diagnostic Laboratory Reporting System (VDLRS).

To use the DDSS, data must first be captured by a laboratory in whatever manner works best for that particular laboratory. The summary totals of those data are then entered into a data entry screen which is provided as part of the DDSS. A computer file is automatically created for use in transferring the data. A reference guide leads the user through this process.

Because the system was written within a software package called "Epi Info", a copy of this program and a user's guide are also included. Epi Info was developed by the Centers for Disease Control and the World Health Organization. It has many capabilities including data analysis, word processing, statistics, etc.

Please contact the address on the inside back cover of this issue for more information about the DDSS. ■

Materials available from the VDLRS are listed below. Send this clip-out order form to:

Veterinary Diagnostic Laboratory
Reporting System
USDA:APHIS:VS
555 South Howes, Suite 200
Fort Collins, CO 80521-2586

Quantity

_____ **DxMONITOR Animal Health Report*** *(Quarterly report of VDLRS data)*

_____ **Introduction to the VDLRS** *(An informational brochure)*

_____ **Report of the 1991 DxMONITOR Committee Meeting** (August 1991)

_____ **Report of the 1990 VDLRS Planning Committee Meeting** (June 1990)

* The most recent issue of the DxMONITOR will be sent. If you want past issues, please call (303) 490-7800.

Name:_____

Affiliation:_____

Street:_____

City/State:_____ ZIP:_____

☐ Please add my name to the mailing list for the DxMONITOR Animal Health Report.

Appendix

This section provides tables displaying the most recently reported diagnostic laboratory data.

Key to Tables in this Section:

- Data are presented by region of specimen origin and month of specimen submission.
- Values represent the number of positive tests (P) and the number of tests performed (T).
- Values reported in the "ALL" category represent all tests performed during the 3-month period. This category may include some tests for which a month of specimen submission was not known. Therefore, the sum of the monthly values may not be equal to the "ALL" values.
- Data totals (positives and total tests) shown for "All Calves" include specimens of unknown bovine class and those from veal calves, in addition to specimens from beef or dairy calves. Thus, the sums of dairy calf totals and beef calf totals do not always equal the totals shown for all calves.
- Values reported for all diagnoses/agents are for months in 1992.
- In some cases, the reported total number of tests performed is a minimum because some laboratories were not able to determine the total number of negative tests performed.
- TOT = Total
- UNK = Unknown
- YTD = Year-To-Date
- Abbreviations for regions used in the tables are:

AK = Alaska	MN = Mountain	SC = South-Central
CL = Central	NC = North-Central	SE = Southeast
FL = Florida	NE = Northeast	SW = Southwest
HI = Hawaii	PA = Pacific	UNK = Unknown
ME = Mideast	PR = Puerto Rico & U.S. Virgin Islands	

Appendix

Equine Viral Arteritis

Region

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	1	0		9	0		13	2			1	0		26
	T	9	4		2033	1		405	253			46	13		2764
Aug	P	2	0		24	0	0	10	2	0		0	0		38
	T	16	1		1774	1	1	312	295	1		9	2		2412
Sep	P	0	0		69	0	0	5	0			2	0		76
	T	11	6		2528	1	1	206	173			28	2		2956
All	P	3	10		102	0	0	28	4	0		3	0		150
	T	36	573		6335	3	2	923	721	1		83	17		8694
YTD	P	10	17		191	0	1	132	46	0	0	17	1		415
	T	122	1683		9994	14	10	1662	3127	1	5	280	164		17063

Paratuberculosis

Bovine

Region

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Apr	P	67			10	1	13	35	0			2			128
	T	532			76	1	17	276	30			18			950
May	P	23			12	0	3	39	2			0			79
	T	389			101	1	3	337	114			2			947
Jun	P	26			8		10	32	3			1			80
	T	254			89		10	302	7			1			663
All	P	116	11		30	1	26	106	5			3			298
	T	1175	22		266	2	30	911	151			21			2582
YTD	P	183	38		68	1	49	108	9			7			463
	T	2004	94		425	7	54	933	295			38			3850

Ovine

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Apr	P	0													0
	T	3													3
May	P							0							0
	T							1							1
Jun	P	0													0
	T	3													3
All	P	0						0							0
	T	6													7
YTD	P	0					1	0							1
	T	8					1	1							10

Caprine

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Apr	P						1	0							1
	T						1	2							3
May	P	0						0	0						0
	T	1						16	2						19
Jun	P							0							0
	T							2							2
All	P	0					1	0	0						1
	T	1					1	20	2						24
YTD	P	1	5				2	0	0						8
	T	3	15				2	20	2						42

Campylobacter

Beef Calves — Region

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P														
	T														
Aug	P														
	T														
Sep	P								0						0
	T								17						17
All	P							0	0						0
	T							3	17						20
YTD	P					0		0	0			0			0
	T					4		29	19			17			69

Dairy Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P														
	T														
Aug	P								0						0
	T								2						2
Sep	P								0						0
	T								4						4
All	P							1	0						1
	T							74	6						80
YTD	P							8	0			0			8
	T							252	12			16			280

All Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P				0				0						0
	T				3				1						4
Aug	P				0				0						0
	T				3				2						5
Sep	P								0						0
	T								23						23
All	P				0			1	0						1
	T				6			84	26						116
YTD	P				0	0		8	0			0			8
	T				23	4		301	38			36			402

Clostridium perfringens Type C

Beef Calves

	Region													
	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul P	1													1
T	7													7
Aug P	0													0
T	1													1
Sep P	0							1						1
T	3							1						4
All P	1							1						2
T	11							1						12
YTD P	3			0		17		5			2			27
T	156			1		120		7			2			286

Dairy Calves

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul P	0					0								0
T	19					1								20
Aug P	0					0								0
T	18					1								19
Sep P	1					0								1
T	23					1								24
All P	1					0								1
T	60					3								63
YTD P	2			0		1		0						3
T	116			1		305		1						423

All Calves

	CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul P	1					0								1
T	42					11								53
Aug P	0					0								0
T	25					12								37
Sep P	1			0		0		1						2
T	45			3		10		1						59
All P	2			0		0		1						3
T	112			3		33		1						149
YTD P	14			1		35		5			2			57
T	438			9		991		8			2			1448

Appendix

Escherichia coli

Beef Calves

		Region												
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	1			5		0		0						6
	T	3			5		3		7						18
Aug	P	0			2		1		0						3
	T	2			2		2		5						11
Sep	P	0			4				2						6
	T	1			4				9						14
All	P	1			11		1	1	2						16
	T	6			11		5	2	21						45
YTD	P	9			12	4	33	17	13			2			90
	T	150			13	4	335	28	139			25			694

Dairy Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	3					2		4			1			10
	T	18					19		12			5			54
Aug	P	1			7		2		5			1			16
	T	17			8		9		16			6			56
Sep	P	1			5		1		6						13
	T	14			5		5		14						38
All	P	5	0		12		5	30	15			2			69
	T	49	4		13		33	74	42			11			226
YTD	P	10	4		14		38	142	40			4			252
	T	111	41		16		414	252	145			30			1009

All Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	8			5		4		4			1			22
	T	35			5		33		19			5			97
Aug	P	3			9		3		5			1			21
	T	25			10		22		21			6			84
Sep	P	15			11		2		8			1			37
	T	32			12		13		23			1			81
All	P	26	0		25		9	33	17			3			113
	T	92	4		27		68	84	63			12			350
YTD	P	77	4		42	6	154	170	53			7			513
	T	455	41		80	10	1468	299	289			71			2713

Salmonella

Beef Calves

Region

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	0					0		3						3
	T	6					5		10						21
Aug	P	0					0		3						3
	T	2					3		23						28
Sep	P	0					0		9						9
	T	4					1		26						31
All	P	0					0	0	15						15
	T	12					9	3	59						83
YTD	P	4			0	0	0	0	39			1			44
	T	185			8	4	411	29	257			26			920

Dairy Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	4			1		4		6			3			18
	T	25			1		28		28			7			89
Aug	P	7					1		5			2			15
	T	23					18		32			3			76
Sep	P	13					6		3			4			26
	T	25					18		25			6			74
All	P	24	1		1		11	0	14			9			60
	T	73	9		1		64	74	85			16			322
YTD	P	28	8		3		26	3	68			18			154
	T	149	43		4		408	252	358			49			1263

All Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	4			1		4		9			3			21
	T	47			1		46		38			7			139
Aug	P	9					1		8			2			20
	T	32					33		55			3			123
Sep	P	14			3		9		12			5			43
	T	49			11		29		51			7			147
All	P	27	1		5		14	0	29			10			86
	T	128	9		52		108	84	144			17			542
YTD	P	41	8		24	0	32	3	111		0	20			239
	T	562	43		207	10	1349	301	642		1	91			3206

Appendix

Coccidia Parasitism

Beef Calves

Region

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	0					1					1			2
	T	1					2					5			8
Aug	P								1						1
	T								16						16
Sep	P	0					0		2						2
	T	1					1		2						4
All	P	0					1		3			1			5
	T	2					3		18			5			28
YTD	P	9			3		11	0	20			5			48
	T	61			10		164	2	62			34			333

Dairy Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	3					0		1						4
	T	13					2		1						16
Aug	P	1					1					1			3
	T	8					5					6			19
Sep	P	1					2		1			1			5
	T	6					6		1			4			17
All	P	5					3	4	2			2			16
	T	27					13	26	2			10			78
YTD	P	8			1		14	7	7			4			41
	T	63			1		338	73	128			21			624

All Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	4					1		1			1			7
	T	25					14		1			5			45
Aug	P	1			1		1		1			1			5
	T	16			4		16		16			6			58
Sep	P	1			1		3		3			1			9
	T	16			12		16		3			4			51
All	P	6			2		5	10	5			3			31
	T	57			92		46	33	20			15			263
YTD	P	22			11	0	48	14	27		0	12	0		134
	T	283			202	1	1109	84	200		1	66	1		1947

Cryptosporidia Parasitism

Beef Calves

Region

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	1					0		1						2
	T	4					3		10						17
Aug	P	0					1		4						5
	T	2					2		18						22
Sep	P	2					0		5						7
	T	3					1		16						20
All	P	3					1		10						14
	T	9					6		44						59
YTD	P	59			4		135	2	42			2			244
	T	188			8		430	2	179			21			828

Dairy Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	7					11		11						29
	T	20					23		27						70
Aug	P	9			8		10		5			2			34
	T	21			9		15		23			6			74
Sep	P	8			3		5		8						24
	T	18			3		15		20						56
All	P	24	2		11		26	9	24			2			98
	T	59	4		12		53	26	70			6			230
YTD	P	48	7		17		168	27	93			4			364
	T	147	41		19		486	73	215			17			998

All Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	13			5		13		12						43
	T	37			8		36		37						118
Aug	P	11			14		11		9			2			47
	T	28			27		28		41			6			130
Sep	P	14			8		6		13						41
	T	35			24		25		36						120
All	P	38	2		40		30	9	34			2			155
	T	100	4		133		89	33	114			6			479
YTD	P	154	7		131	0	424	29	141		0	7	1		894
	T	569	41		350	4	1692	84	407		1	47	1		3196

Appendix

Bovine Viral Diarrhea

Beef Calves

Region

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	0					0		1						1
	T	1					4		5						10
Aug	P	0					0		1						1
	T	1					3		14						18
Sep	P	0							0						0
	T	1							6						7
All	P	0					0	0	2						2
	T	3					7	2	25						37
YTD	P	12			2		5	0	5			1			25
	T	77			14		191	11	43			14			350

Dairy Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	1					1								2
	T	16					9								25
Aug	P	2					4		0						6
	T	14					10		1						25
Sep	P	0					1		0						1
	T	11					2		1						14
All	P	3					6	1	0						10
	T	41					21	32	2						96
YTD	P	6			0		12	13	7			0			38
	T	82			1		364	151	72			1			671

All Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	2			0		1		1						4
	T	24			24		24		7						79
Aug	P	2			0		4		1			1			8
	T	18			140		25		15			1			199
Sep	P	1			0		1		0						2
	T	27			72		13		8						120
All	P	5			0		6	2	2			1			16
	T	69			282		62	39	30			1			483
YTD	P	29			20	0	26	14	12			2			103
	T	359			452	5	1191	174	137			27			2345

Coronavirus

Beef Calves

Region

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	1					0		4						5
	T	7					4		8						19
Aug	P						0		2						2
	T						2		11						13
Sep	P	0					0		5						5
	T	4					1		15						20
All	P	1	0				0	0	11						12
	T	11	1				7	2	34						55
YTD	P	19	0		0		65	2	34			2			122
	T	166	9		2		472	11	133			30			823

Dairy Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	2			1		3		2						8
	T	21			2		24		20						67
Aug	P	1					1		6			1			9
	T	21					19		17			3			60
Sep	P	4					3		0						7
	T	18					17		9						44
All	P	7	0		1		7	1	8			1			25
	T	60	8		2		60	33	46			3			212
YTD	P	21	10		1		92	7	37			7			175
	T	138	54		3		506	147	147			30			1025

All Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	6			1		4		6						17
	T	40			20		40		28						128
Aug	P	2			2		1		8			1			14
	T	25			14		33		28			3			103
Sep	P	7			0		4		5						16
	T	37			43		29		24						133
All	P	15	0		3		9	1	19			1			48
	T	102	9		155		102	40	80			3			491
YTD	P	78	10		8	0	219	9	75		0	15			414
	T	514	63		288	5	1528	170	290		1	82			2941

Rotavirus

Beef Calves

Region

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	2					2		1			1			6
	T	7					4		9			5			25
Aug	P	0					0		3						3
	T	1					2		14						17
Sep	P	2					0		10						12
	T	4					1		20						25
All	P	4	0				2	0	14			1			21
	T	12	1				7	2	43			5			70
YTD	P	52	0		0		84	0	63			4			203
	T	180	9		2		462	11	174			36			874

Dairy Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	1					5		9						15
	T	22					24		27						73
Aug	P	9					5		8			1			23
	T	24					19		22			6			71
Sep	P	4					4		6			1			15
	T	19					17		21			2			59
All	P	14	4				14	4	23			2			61
	T	65	8				60	31	70			8			242
YTD	P	36	14		1		169	6	74			10			310
	T	155	56		4		508	145	229			36			1133

All Calves

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	7			1		7		10			1			26
	T	41			18		40		36			5			140
Aug	P	10			3		6		11			1			31
	T	29			26		33		36			6			130
Sep	P	7			2		5		16			1			31
	T	38			39		29		41			2			149
All	P	24	4		18		18	5	37			3			109
	T	108	9		135		102	38	113			13			518
YTD	P	127	14		79	1	340	7	140		0	17			725
	T	545	65		372	6	1841	168	415		1	89			3502

Etiologic Agents Associated with Piglet Diarrhea

Clostridium perfringens Type C

		Region												
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	8					0		1		0				9
	T	159					14		1		1				175
Aug	P	6					2				0				8
	T	135					21				1				157
Sep	P	11					0								11
	T	183					12								195
All	P	25					2		1		0				28
	T	477					47		1		2				527
YTD	P	114			0	0	16		1		0	0	0		131
	T	1047			2	1	480		1		10	3	1		1545

Escherichia Coli

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	68					32		0		0	7			107
	T	180					70		1		1	16			268
Aug	P	66					16				0	4			86
	T	157					60				1	11			229
Sep	P	78					33								111
	T	210					69								279
All	P	212					81		0		0	11			304
	T	547					199		1		2	27			776
YTD	P	500			1	2	397		0		2	45	1		948
	T	1370			4	4	1142		10		9	126	1		2666

Coccidia Parasitism

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	18					13				0	6			37
	T	157					48				1	15			221
Aug	P	27			0		7				0	2			36
	T	140			1		50				1	10			202
Sep	P	36					16					3			55
	T	204					57					6			267
All	P	81			0		36				0	11			128
	T	501			61		155				2	31			750
YTD	P	137			1	0	110		1		1	27	0		277
	T	1253			93	3	942		15		9	95	1		2411

Appendix

Etiologic Agents Associated with Piglet Diarrhea

Rotavirus

		Region												
		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	41			1		7		0			1			50
	T	143			25		67		6			13			254
Aug	P	31			0		9		0			3			43
	T	146			8		59		5			11			229
Sep	P	36			0		3								39
	T	153			30		68								251
All	P	108			3		19		0			4			134
	T	442			113		194		11			24			784
YTD	P	273			27	0	216		2		0	28	0		546
	T	1157			315	5	1060		33		8	131	1		2710

Transmissible Gastroenteritis

		CL	FL	HI	ME	MN	NC	NE	PA	PR	SC	SE	SW	UNK	TOT
Jul	P	9			0		2		0						11
	T	127			15		66		2						210
Aug	P	8			0		1		0			1			10
	T	113			8		59		5			2			187
Sep	P	11			0		7								18
	T	147			30		67								244
All	P	28			8		10		0			1			47
	T	387			86		192		7			2			674
YTD	P	126			19	0	99		3		0	23	0		270
	T	1131			202	5	1006		32		8	114	1		2499

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